Clinical Medicine and Surgery

The American Journal of

CLINICAL MEDICINE

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JULY MCMXVII

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PUBLISHED BY THE AMERICAN JOURNAL OF CLINICAL MEDICINE, Inc.

ENTERED AS SECOND-CLASS MATTER MARCH 31, 1906, AT THE POST OFFICE AT CHICAGO, ILL., UNDER ACT OF MARCH 3, 1879.

Subscription Rates.—To any part of the United States, Canada and Mexico $2.00 per year, postage free, single copies twenty cents; to all other countries an additional charge of $1.00 is made for postage. N. B.—Make all checks and remittances for subscriptions and renewals payable to THE AMERICAN JOURNAL OF CLINICAL MEDICINE, adding 10 cents for exchange. **Three years for five dollars.**

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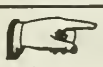

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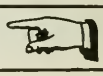

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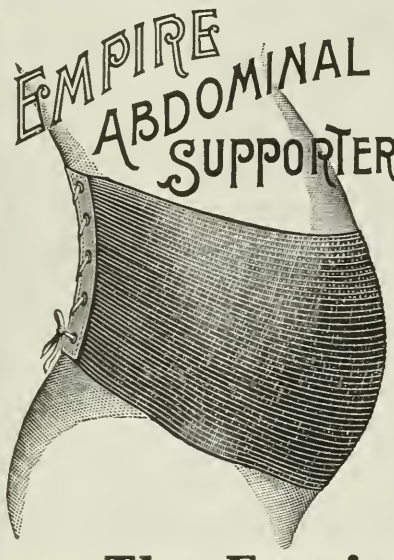

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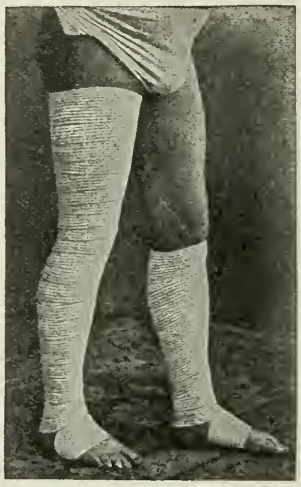

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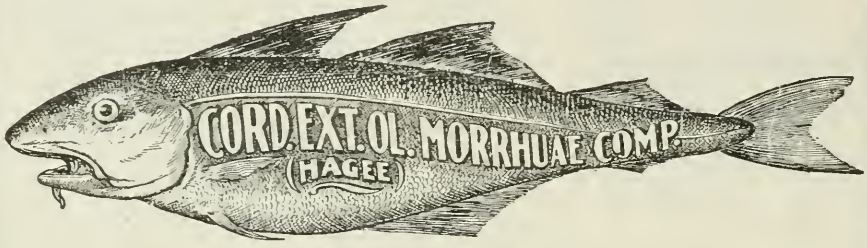

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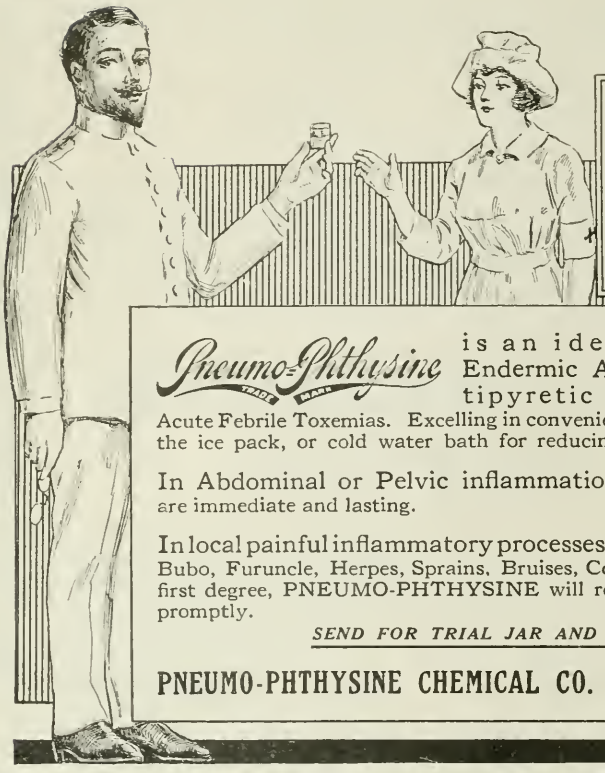

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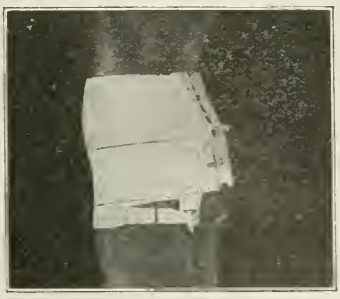

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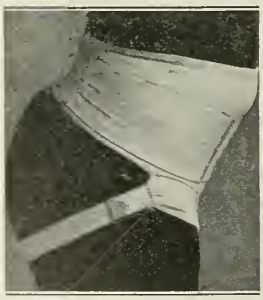

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The American Journal of
CLINICAL MEDICINE
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Vol. 24. No. 7 JULY, 1917

War—Teutonic War

WE shall start with a premise from which none of our members whose education was "made in Germany" will dissent—that anything Germany does is right.

To the next proposition, they may not yield assent as quickly, but, we present it, nevertheless—that what is right for Germany or Germans is right for us.

Having plunged into war, Germany proceeds to illustrate, by the deeds that speak louder than words, that Sherman was exactly right when he said that "war is hell." As a "therefore" to this "whereas," the Germans add that it is necessary to impress the foe with terror—as their troops were instructed to act in China, so that not a Chink would dare look askance at a German in the next hundred years. So, we have the sinking of unarmed vessels, like the Lusitania, the bombing of unprotected towns and slaughtering of thousands of innocent noncombatants, men, women, and little children, defended as a military necessity.

Then, in neutrality-guaranteed Belgium, when some half-imbecile shoots at a German, the inhabitants are herded against a wall and shot down, the town is looted and destroyed. It matters not that these people were innocent of participation in or sympathy with the idiotic deed—they must be terrorized that no other shall attempt such a crime.

We have among us millions of Germans. It is safe to say that no element of our cosmopolitan population has received a heartier welcome than they. The big, honest, slow-going but steady, great-hearted fellows have made themselves liked as few other races have been. We have taken to their beer, their music, their waltz; we have learned to play pinocle and sit out our evenings in the gardens where swiftly flows the lager and have joined heartily in the stentorian chorus of "Die Wacht am Rhein."

We have even allowed them unhindered to take our ideas across the ocean and return the resultant products at a smart profit, to charge our sick a dollar for an eight-cent ounce of phenacetin, so to influence our legislation as to extinguish our dye-manufacture, and enjoy privileges under our patent-laws that Germany would never dream of allowing our own inventors. In America, the German has enjoyed a degree of freedom he has never had at home, where the "*das ist verboten*" stares him in the face at every turn. Nothing *ist verboten* here to him, it seems.

But, while thus enjoying our hospitality, an unreserving admission to every right and

privilege a native-born American possesses, after having been taken to our hearts as scarcely any other nationality has been, we find that certain Germans, acting under the direction of their official representatives to our government, have been waging war against us, burning and blowing up factories, destroying property and murdering our citizens; not as an armed force against which we might oppose our own, but treacherously, while moving among us as peaceful citizens. Spying is punishable with death when engaged in by those between whose governments war has been declared. What should be the penalty when such deeds are inflicted against a people with whom the perpetrators are at peace? Let Germany answer: What has she done in Belgium to the nonmilitary who has dared to assault her soldiery?

Assume that a citizen of Milwaukee, a German by birth, has tried to blow up the great industrial establishments where many men earn their living—what shall be our action, adopting the German practice? Obviously, to assemble all the German citizens of the town, shoot them down and confiscate their property—that appeals to us "dollar-chasers" as better than looting and destroying it.

Without some such radical remedy as this the German name is in danger of becoming detested, and the race classed with rattlesnakes and tigers, as enemies of mankind, to be destroyed whenever met, without waiting for overt acts of hostility.

Twenty centuries ago, the pressure of the Germanic races against the south of Europe commenced, and continued until the Roman state was broken and the northern flood overwhelmed it. Goth, Vandal, Sueve, Herulian, Gepid, Frank, Alleman, Burgundian, Langobard, Marcoman, Quade, Ruhian, Lygian, Spade, Turciling, and more established their rule over the whole of Europe and northern Africa. The conquest was complete; not the semblance of rebellion on the part of the previous populations was ever attempted. But, an ethnologic study of these regions demonstrates the fact that the former denizens are almost wholly represented today. The Teutonic conquerors have disappeared. The Aquitanian is now as described by Cæsar, the Spaniard is Iberian, the Lombard is brunette; even among the Burgundians the blond type is a rarity. Notwithstanding their innumerable hordes, their irresistible prowess, the northern races have been extinguished.

What became of these conquering peoples? They existed in France until the revolution, when their intolerable tyranny led to the eradication of the whole ruling class. The descendants of Rurik have persisted in Russia, where they formed the Tschinn, but just now overthrown. But, throughout Southern Europe, the detestation inspired by them has led to a gradual but persistent elimination. Wherever there was an opportunity to kill off one of them, there was sure to be a victim of their oppression ready to insert the knife. The final result we see in the extermination of the powerful warrior-races of the North and the restoration of the original possessors of the soil.

Truly: The battle is not to the strong, nor the race to the swift.

We have here in America, we are told, twenty millions of Germans and their children, We know them well; they are our neighbors and friends. They are *not* incendiaries, murderers of innocent, treacherous plotters against the land and the people who have received them with open arms. To their great and noble qualities of head and heart, we have responded with respect and love. They are not merely Germans, but, Germans developed and matured on the soil of free America. They have always had the door open to return to their native land, but few have shown any disposition to go back to a country where an unarmed citizen may be cut down by an officer for resenting an insult to his wife, and the murderer dismissed with a reprimand. They have found life in a republic not wholly unlivable.

To these men, we look for an influence over the situation that should prove a deciding one. They are Germans and have their family connections in their mother land. They are Americans and can speak from experience of American institutions. They can realize, as those in Germany can not, how matters look to the nonpartisan world. Is the united influence of this great body of no avail in affecting their home people? Add it to the socialistic sentiment that is becoming significantly outspoken in the Reichstag, and let the demand that this frightful calamity to mankind must cease, be spoken with an emphasis that will carry conviction. Let them say to the German race that, if any class stand in the way, that class must be eliminated from the problem. Let them say that a democratic Germany can have no enemies, that the world's doors must stand wide open to the German and his commercial and other peaceful industries; that a democratic world stands ready to welcome it, and that no race, country or government would

seek to restrain Germany in aught except the attempt to acquire dominion over others.

The Americans of German birth or descent know that this is absolutely true. Have they the force to impress it upon their European kindred?

Meanwhile this war of treachery has resulted in the loss of American lives, the destruction of many millions of property, throwing out of richly remunerative work many thousands of our working men and disarranging the transportation service on which our business and our lives depend. Yet, great as has been the damage done us, it does not approach that which this war has inflicted upon the Germans within our borders. It has placed every man of German birth or name under suspicion. German workmen will be discharged from shops where anything is made that might be of use to our warlike equipment or pertains in the most indirect manner thereto. Fewer Germans will be employed to cultivate our fields, for they may destroy the seeds to prevent the crops feeding us and our soldiers. We may not buy from German merchants, for the messages sent to the commercial centers for goods may contain treasonable information. The German can not take a spin in his Ford or a walk through the green fields, without the suspicion that he is spying out the land for the destroyer. The German minister has been the beloved shepherd of his flock for twenty years—but they offered up thanks to high heaven when the Lusitania sank. Doctor Mueller has been our trusted reliance for many a year—but they say the Germans poisoned the wells as they evacuated French territory. In every possible intercommunication with one of their race, we must hold in mind the all-embracing overweening domination of "military necessity."

Confronted and environed with this all-pervading atmosphere of suspicion, what is the truehearted, really loyal man of Teuton extraction to do? He betakes himself to the recruiting office, to demonstrate his devotion to America by offering to fight for her against his racial kin. "Name?" "Stein!" And at once the dark look of suspicion meets him. He may protest his honor ever so fervently, it is assumed by everybody that he is possibly enlisting to play the spy more effectively. The utmost care is manifested to avoid placing him on any duty where he may do harm. Conversation ceases when he approaches. Nobody dares mess with him on terms of frank comradeship. Instead of this, his bunkie is a sharpfeatured detective, who seeks to construe every word and act into something suspicious, who arranges traps to destroy him with the blasting accusation of treason to his country.

The remedy for this lies wholly with the Germans of America. Let them make their united appeal to the Germans of Europe. Twenty millions must surely have enough weight to make their words sink into the consciousness of the war-weary people at home.

The need is glaringly evident—democracy—freedom to Germany—taking her place abreast of the rest of the world politically. German commerce, German science, German industry, German art, the German race have no enemies in the wide world, but only rivals. Germany as a master is a conception against which the world is solidly arrayed.

Most human quarrels arise from the fact that both wise men and dunces exist who are so constituted as to being incapable of seeing more than one side of any fact or idea, while each asserts that the side he sees is the only true and right one.—*Balzac.*

FOOD SHORTAGE: AN APPEAL TO PHYSICIANS

Europeans have often called ours a "land of unlimited possibilities," and we have ever been satisfied with admitting the justice and correctness of this designation. Rich profusion, unstinted liberality, and a generous indulgence in all the good things of life have created a feeling that there always will be enough and to spare, and even have caused us not only to be profuse, but wasteful, in the assurance that our needs would always be fully supplied.

In consequence, it has many times been asserted, and with great truth, that the average American dinner-table is spread with an abundance that is little short of wastefulness, and the insistence is great, more particularly among the lower classes, upon using only "fresh" foodstuffs, refusing to admit made-over dishes to the table. While in normal times this position can injure only the people themselves, in so far as they are devoting an unduly large proportion of their income to the cost of eating, in the present existing circumstances, an adherence to the American habits of wastefulness is sheer recklessness and all but criminal. This is forcefully pointed out by Mr. J. Ogden Armour, in a correspondence to *The Journal of the American Medical Association* for May 5, and we strongly urge all of our readers to peruse this letter carefully and also to bring it to the attention of their clients, while at

the same time persistently enjoining all to heed Mr. Armour's timely warning.

In his letter, Mr. Armour points out that a food shortage without precedent confronts the United States and that, unless there is a change for the better, the coming winter will see prohibitive high prices and consequent suffering from lack of food. Increasing the production of foodstuffs is not the only remedy available for this serious impending condition, but, as Mr. Armour justly says, the prevailing wastefulness must be corrected and the American people must be taught proper habits of eating and careful living.

It is not to be inferred that penuriousness should take the place of wasteful habits and undue profusion; however, the people should be made to understand that the most expensive cut of meat is not by any means the best or most nourishing; that meat three or even two times a day is in excess of our needs; that potatoes very suitably can be replaced by other carbohydrate foodstuffs. Besides, there is a great variety of other things that people should be taught, one of the most important referring to the deviation of large amounts of grain for the production of alcoholic drinks, as pointed out in another article in this journal, (June issue, page 453.)

Let us acquire, and teach others to adopt, habits of reasonable thrift tending to conserve as much as possible the existing food supply and thereby comply with a portion of our duties toward solving the very serious economic problems confronting us as a nation if we are to sustain, at the same time, the entente allies.

Regrets! There's nothing harder to bear—unless it's helplessness when there's need of quick action.—
—Dana Gallin.

FORECAST: THE AMERICAN SOLDIER

Surely, if ever a country put its best foot foremost, we are doing that very thing by sending, as our first contribution to the armies of the world, our doctors and their equipment. For half a century, we have drawn upon the world for the best every land has developed, in the line of surgical technic and material perfection in the scientific departments of our art; and to these we have added a directness of practical application all our own. In the field of sanitation, we have given the world illustrations, in Cuba and in Panama, of our efficiency, that leave us no rivals.

The melting-pot—well named! We have shown our capacity for amalgamating every element contributed by Europe, Asia or Africa; by Indo-European, Semite, Malay, Mongol; happily fusing all into one harmonious whole. We are fusing the races as we have fused their ideas, their methods, their varying capacities of every sort. Out of the individualism, that rose to a passion with Jefferson, we have developed a capacity for organization that has had nothing comparable since Rome fell. We began aright, with the development of the individual. Pioneer-conditions brought into prominence the self-reliance and initiative that made the American an inventor, a resourceful adapter of whatever means were within his reach to the necessities of the moment. The most apposite illustration of this, that occurs to us, is, not the invention of the aeroplane or the submarine or of any other wondrous complex combination of forces in machinery, but, the soldier who, scouting near a camp of hostile Indians, heard the rattle of a viper close at his side. A shot meant discovery and death by torture. Watchful waiting meant death, likewise. The quickwitted, resourceful fellow simply spat tobacco-juice into the snake's eyes, and the problem was solved.

We have undergone a transformation analogous to that of a people who have just passed from democracy into monarchy—the most dangerous of all warriors to their neighbors. From individuality, we have passed into organization, into the formation of mass-energies, directed by single wills. We are an army, all but the guns and the military technic; and all ready to add these to the present individualities. The initial successes of the South were due to her pre-war civil organization. The South had, in the proprietors of her plantations, men accustomed to command; in their subordinates, men trained to obey, to ride and to shoot—an army in all but the drill. It required years to develop soldiers like these, out of men called from farm and shop, electing officers out of their own number and kind, most of them having never fired a rifle or straddled a horse—but, we did it in time.

The present year is going to see American armies, in numbers justifying the term, on the firing-lines. The world is going to see in these armies the most formidable type of warrior it has yet witnessed. This is no brag, no baseless effusion of spreadeagleism, but, a cool deduction from comprehensible premises. On an individual development never before equaled, we have built a capacity

for organization rivaled never before nor now; and the result we are placing before the eyes of humanity.

We start with the medical element, with the American surgeon and the American sanitation-expert. We know what they can do; we know that the rest of the items going to make up the modern army will not fall below the standard set by these men—and one that the world can not excel if any part of it can equal the contributions of American manhood. The men who are pulling off baseball-matches within range of the German guns are going to do some fighting as well.

No need for the death's-head-and-cross-bones of dreadfulness, to strike terror into a childish foe—there is a passionless, methodical way of fighting, that wins over the Berserk rage.

Finally—and here lies the most significant suggestion of this forecast—when we here speak of Americans, we do not confine our thought to the Morrises, the Robertsons, the Murphys, the O'Neils, the Millers, but, include without distinction the L'Espinasses, the de Roulets, the Pacellas, the Brolaskys, and—yes, the Schmidts and the Von Zelinskis. And, whatever we do, we must not omit Isadore—he will be right up in the front rank, brave and capable as the bravest and keenest.

So many people are so selfish and small-minded that they can only cry and protest against inflictions; but there are some who welcome the bitter with the sweet, who grow big and fruitful with sorrow.

—*Marjorie Benton Cooke.*

FOUR TRAINING-CAMPS FOR ARMY-DOCTORS

The article following below is reprinted from the official bulletin published daily by the Committee on Public Information (Mr. George Creel, chairman), under the auspices of the United States Government. This little journal contains much of intense interest to every live citizen of the Republic. Being official, every statement in it can be depended upon as accurate. The subscription-price is $5.00 a year. We quote:

"The creation of three new branches of the medical service of the United States Army is announced by the War Department. These branches which have been made necessary to meet war-conditions are: A division of sanitary inspection, headed by Col. Frederick P. Reynolds; a division of hospitals and hospital-construction, headed by Col. James B. Glennan; and a division of medical military instruction, headed by Col. Edward L. Munson. These three branches are coordinated through Col. Henry R. Birmingham.

"The Army needs 5000 doctors immediately, and by the end of the year twice that number will be required, as 10 medical officers are needed for every 1000 men.

"To meet the demand for doctors, four training-camps will be established for military medical instruction. Fort Riley, Kansas; Fort Benjamin Harrison, Indiana; and Fort Oglethorpe, Georgia, have already been selected, and the fourth camp will be designated shortly. Training will begin at the first three camps on June 1, with 600 doctors assigned to each camp.

"The doctors will be put through a course which is divided into three periods of four weeks each. This course will be designed to familiarize the men with the functions and environment of medical military work. In particular, it will be necessary to teach the doctors just what training they must give the enlisted men in the hospital corps. Thus, the first four weeks will be spent in acquainting the doctors with the duties the enlisted man is expected to perform. The second month will be devoted to training the doctors in the duties of the medical officer and in an intensive book training on military medical matters. The third month will be spent in training in the field.

"In case of an emergency, it will be possible to cut off the last month of training, and it even may be possible to omit the second under stress; but, the first is essential, as more than 50,000 enlisted men will be needed in the medical corps, and it is imperative that the Army shall have sufficient doctors to train these men and supervise them in their duties.

"An ambulance company and a field hospital will be established at each training-camp for doctors, and later there will be special schools for the enlisted men in the medical department.

"The first 1800 doctors for the camp will be drawn from the medical reserve and from the militia. Doctors may join the medical department of the Army through application to local examining-boards. These boards will be extended.

"Colonel Glennan's division of hospitals and hospital-construction will be immediately concerned with the preparation of 32 hospitals for the divisional cantonments. Temporary wooden structures will be added to existing brick buildings. It is estimated

that each cantonment hospital will have a capacity of 1000 beds. It will also be necessary to build several general and clearing-hospitals and one or two receiving-hospitals in seaport cities.

"The division of Colonel Reynold's—sanitary inspection—has to do with all sanitary matters pertaining to armies in the field, such as kitchens, mess-shelters, ice-boxes, and all sanitary appurtenances. The work will be carried on by a corps of general sanitary inspectors, with the ranks of colonels and lieutenant colonels. A general sanitary inspector will also be attached to the commanding general of each army."

Two things in life are absolutely certain—Death and Sorrow; and these two, about which there is nothing contingent, alone possess the power to surprise us. All that is problematical we are ready for and accept without lifting our eyebrows; but this finger of Sorrow, whose shadow falls athwart our path a few days' journey ahead, and Death, who waits at its end without clamor, since he is sure of us, to these we say, "It cannot be, it is impossible." We count upon the uncertain, the inevitable surprises us.

THE NATIONAL WHITE-CROSS LEAGUE

The National White-Cross League was incorporated in Illinois in 1910, with the object to buy and sell merchandise and commodities of various kinds and descriptions, the profits derived from the sale of which were to be expended in assisting and giving proper medical aid and treatment to those suffering from tuberculosis and who can afford to pay only partly or not at all for medical care and nursing.

The league raised funds by sending out canvassers to sell, from house to house, soaps and other toilet-articles, flavoring extracts, and similar goods. Any surplus from the proceeds was to be set aside as a tuberculosis-fund. The National White-Cross League operated The Burr Oak Sanatorium for Consumptives at Wheaton, Illinois, and applied for permission to conduct tuberculosis-clinics in various cities in the central and eastern states.

The Bulletin of The National Association for the Study and Prevention of Tuberculosis for May contains a detailed discussion of the operation of the National White-Cross League, from which it appears that during the first five years of its existence about $200,000 was received from the sale of merchandise and that about 13 percent of this amount was expended for tuberculosis-work. It is shown, further, that the Burr Oak Sanatorium has been closed since November, 1916, at which time the medical superintendent, Doctor Moulding, died. However, despite this fact, the commercial activities of the league were continued.

Without entering into any details concerning this league, sufficient evidence is presented in the article referred to to cause us to view the purposes and activities of the National White-Cross League with grave concern and to request our readers to use their influence in discouraging their clients from patronizing the canvassers of this organization. In justice to these canvassers, though, it may be stated that, in all probability, they are not informed of the actual state of affairs and that they are selling their goods in the belief that thereby they are furthering a meritorious work.

Nevertheless, it undoubtedly will be most expedient and conducive to best results if the people will make their contributions for the benefit of tuberculosis-work to properly accredited societies and institutions and that they refuse to support the National White-Cross League, which seems to be conducted primarily for the financial advantage of its principal officers.

THE ALKALOIDS ARE NOT THE ONLY GOOD THINGS

We stand for the alkaloids, yet, we say but little about them nowadays. Why? Because we are for something bigger even than the alkaloids. We stand for everything that goes to improve our means of treating the sick, of relieving suffering and staying the hand of death. That is why we are for the alkaloids, but also why we are for very much more.

We never overestimated the values of the alkaloids. We know that the possibilities for their application are as yet scarcely touched. The amazing discoveries as to emetine lie behind many other active principles, waiting for the investigator. The art of applying remedies to influence the physiologic functions toward healthy working is scarcely realized yet as a possibility. But, the profession has turned its attention to other means, and the development in these has been fruitful—too fruitful to be neglected—and, hence, we must follow in this direction. The man who neglects to avail himself of the advantages accruing from the use of the animal-products in medicine, and of sera, antitoxins, bacterins, vaccines, is a back-number. We never have been that;

we never shall be that. We have carried the study of the active principles so far ahead of the profession at large that we now must wait for them to catch up. Meanwhile we are presenting to clinicians the rich results of the workers among biologic remedies.

The best thing for the patient, be it what it may.

"A man's mind may be likened unto a garden, which may be intelligently cultivated, or allowed to run wild; but whether cultivated or neglected, it must, and will bring forth. If no useful seeds are put into it, then an abundance of useless weed-seeds will fall therein, and will continue to produce their kind."—*James Allen.*

THE PROPERTIES OF BOLDINE

We have before us a pamphlet—commercial—in which is given the history of ipecacuanha, down to the discovery of the powers inherent in emetine and the development of the emetine-therapy. It is amazing that for three centuries we should have known of the control exerted by this plant over dysentery, and, yet, have waited two hundred years before the pure alkaloid was extracted, and then waited another century ere we found the reasons for the old belief. But, the most amazing thing about it is, that even now the profession has not realized that the other pure alkaloids probably possess values as great as that from the Brazilian plant.

Proof? What would you call proof? You had morphine, atropine, quinine, strychnine, cocaine, pilocarpine—what more could you ask? Must we wait yet another century for another Rogers to arise and discover the next gem, when it is lying at our very feet?

Take boldine, the active principle of peumus boldo.

We may increase the quantity of the renal excretion by means of many diuretics, but, do you know any that increases the excretion of solids by this route? That is what counts—getting rid of the water is of moment only in dropsies. Yes, boldine increases the output of urea and at the same time stimulates the liver to put out more bile. Indeed, so powerful is its renal stimulation that it must be used with care; for, if the kidneys are driven by it beyond their physiologic limit, a state of nervousness supervenes. As a diuretic, boldine is a weapon only for a real clinician who watches his patient. With ordinary care, boldine is our best remedy in those cases of chronic deficiency in the excretion of urinary solids; and in doses below the point of irritant it may be administered for months without harm, immediate or remote.

It is in affections of the liver that boldo and its main active principle have won most praise. We speak particularly of the alkaloid, because boldo contains also a glucoside, which possesses decided hypnotic properties, and which are, generally, undesirable; it is also a local anesthetic equal to cocaine. Besides, the crude boldo preparations are too variable in their content of boldine for anything like accurate prescribing.

Boldine has been employed especially by our gallant allies, the French. They have been brought face to face with hepatic maladies since Indo-China came under the flag of France. Chronic hepatitis, jaundice, hypertrophy of the liver, the hepatic maladies contracted during residence in the tropics have yielded to boldine. Also, bilious vomiting, headache, and jaundice disappear under its use.

Houdé was one of the first to call attention to boldine as a remedy for gallstone, relying upon its power of increasing the secretion of the bile, the natural solvent for these concretions. It does not affect the temperature, pulse or respiration or the quantity of the urine. Its first noticeable effect is an increase in the flow of bile, then subsidence of hepatic congestion. Zaremba found it useful in hepatic abscess, where emetine meets a limitation. In malarial forms, boldine is a useful adjuvant to quinine. Even in cirrhosis this alkaloid has been employed with benefit.

In alcoholic disorders of the liver, boldine is useful, provided the poison is discontinued. The gastric irritation subsides quickly under its influence and the function of the liver is soon activated.

The daily dose of boldine should not exceed 1 centigram, divided into as many parts as convenient. Since 1 kilogram of boldo-leaves contains only 2 to 3 centigrams of the alkaloid, it is obvious that but a feeble and unsatisfactory effect can be hoped for from the usual doses of the crude drug. Reliance upon the fluid extract in 1-dram doses easily accounts for the failure of boldo to win a place with the masses of the profession.

The Paris Academy of Medicine holds funds for an annual prize of 650 pounds sterling (about $3250) for the discoverer of circumstances tending to widen the domain of medicine and make it invade that of surgery. The surgeon, who knows nothing of drugs and their application, who never sees any but the failures of the drug users and does not realize that these are exceptional, will assure you

convincingly that this is impossible, that there is nothing that will dissolve a gallstone in the biliary passages. Nevertheless, he also is but one of the blind men feeling just one part of the elephant.

Should we not look upon marriage less as an absolute blessing than as a remove into another and higher class of this great school room, a promotion, for it is a promotion, which creates new duties, before which the coward sometimes shrinks; and which gives new lessons, of more advanced knowledge, with more advanced powers to meet them, and a much clearer vision to read them?

—*Florence Nightingale.*

THE MILITARY SURGEON

One of the notable developments of modern military science is the standing of the military surgeon, whose work has assumed an importance that is acknowledged to be immeasurably greater than that conceded to it even a few years ago. This change had its inception during the war between Japan and Russia, owing, especially, to the excellent work done by the medical service of the Japanese army. It received stimulation during the Boer war; still, despite the obvious bearing that painstaking and suitable sanitation has upon the welfare of the army, the standing of the military surgeon was a somewhat tender subject in most armies. Even at the beginning of the present European war, and especially in Germany, military surgeons had much to suffer from the somewhat negligent attitude assumed toward them by the combatant officers. All this has been changed, however, and the noncombatant medical officer has come into his own, now being acknowledged as one of the most important factors of the service.

The British Medical Journal for March 31 refers to a report by Colonel Hans Daae, head of the Norwegian army medical service, upon his tour of inspection in Germany during the summer of 1916, in which he was given certain facilities to study German experience, for the benefit of his own service. These observations made evident the necessity, seen soon after the start of the war, of revising the organization of the medical service in the field.

Early in the war, a single casualty was the signal for a medical officer to be sent off to the spot at once; in consequence, the medical service suffered great losses in the first months. A similar mistake also was made in establishing dressing-stations before it was even comparatively safe to do so. When the casualties in the medical service had assumed alarming proportions, orders were issued to the effect that the military surgeons should not be sent hither and thither at the command of the nonmedical staff, but they themselves should determine when and where their services were to be given. It had become plain that the military surgeon could balance the risks to the medical service against the good it could do far better than the nonmedical divisional commander.

Colonel Daae was struck by the improvement effected, during the war, in the status of the officers in the army medical service. They had become far more independent and were, in every direction, more respected than before. He also noted that the heads of the medical service were spoken of with the same regard as the leading generals in the field; the senior officers of the cavalry, artillery, and engineers certainly did not enjoy the same prestige. It would appear that before the war the military surgeon in Germany was regarded as a necessary, but inferior, official, by no means on the same footing as his fellow officers in the other services. Now this gulf has been largely bridged, and this process has been hastened by the fact that the old distinction between combatant and noncombatant officers has been much diminished. The combatant officer sits, in relative safety, by the telephone or desk, while the noncombatant medical officer shares the vicissitudes of the troops of the fighting-line.

THE WRIST-WATCH

Unlimited fun has been directed against the men who have adopted the wrist-watch. They are dudes, mollycoddles, pinheads, and everything else the red-blood man can think of to sling at the chap who wears collars. But, who are the men who really wear these practical devices?

Engineers, officers of the army and navy, airmen, travelers, sportsmen, and, in short, men to whom convenience and the promptness of information means much, carry their timekeepers attached to the wrist. Chauffeurs also find it more than a convenience; with them, indeed, it is a necessity. Yet, all these men are the very reverse of what we would designate as dudish or effeminate.

We have found the wrist-watch of service in doing laboratory-work when it is necessary to go from table to table and from room to room, while, yet, marking the time closely, especially when certain serum reactions are under way. In traveling and on many other occasions, the wrist-watch has proved itself a great convenience and far superior to the

timepiece carried in a pocket that is sometimes difficult of access.

In our opinion, the man to whom the wrist-watch appeals even more than to many others is our old friend, the doctor. To take just one instance, the very fact of feeling the patient's pulse will send up its rate perceptibly if the sick person is at all nervous or apprehensive. It is simple enough, however, to pass the hand soothingly over the patient's wrist and take the pulse under the guidance of the wrist-watch; or, then, to stroke the patient's forehead, resting the hand over the temporal artery, where the pulse rate can be ascertained with perfect ease and without the patient's being aware of it, which assures correct reading.

We distinctly object to being subjected to ridicule simply because we find it convenient to carry our watch fastened to a wrist-strap.

In dealing with senile diseases, the object must be, to restore the organism to the normal senile state and not to the normal state of maturity.—*I. L. Nascher.*

THE HOME HOSPITAL

Since the inception of the crusade against tuberculosis, various methods of cure and prevention have been tried, the principal ones being the isolation of consumptive patients in sanatoria and the intensive utilization of fresh-air and dietetic treatment. The operation of day camps or night camps, of summer camps, of hospital-ships, preventoria, and so on, was but an extension of the primary idea that the consumptive patient would do best individually and would be of least harm to his family if he were interned, so to speak, and kept away from the activities of daily life until the tubercle-bacilli had disappeared from the sputum and his ability to earn a living had been restored, at least to a suitable degree.

Manifestly, this view had a great many drawbacks and even was found to be based upon mistaken conceptions in various respects, the principal one being that the association with patients having tubercle-bacilli in their sputum is not of as great danger to adults as had been believed in the early days of bacteriological research; although the possibility of danger undoubtedly is grave for infants and little children living in close communion with the patients. Of the most decided moment, however, was the fact that it is impossible to isolate those very patients who are the most productive sources of disease in their families, namely, those living in tenements and other crowded and unfavorable environments. It is quite impossible to induce all of the patients in tenement districts to remain in public sanatoria for sufficient periods of time; and, if that were possible, there is not available a sufficient number of beds to take care of even one-tenth of those requiring sanatorium care.

Moreover, it has long been realized, at least by a few careful tuberculosis-students, that by the time a member of a tenement-family is recognized as being consumptive the children of this family long have become infected and, indeed, usually all are tuberculous and that they show various evidences of ill health and of physical deterioration, if not of outright clinical disease. The services of the district-nurse and the other activities of social service applying to tuberculosis-work were found altogether sadly inefficient in proportion to the magnitude of the problem, nor could the tuberculosis dispensaries be expected to improve conditions.

In course of time, the idea gained ground more and more that, after all, the home is the most natural and the most effective place to care for many classes of dependents for whom institutions were formerly the only alternative. There developed a dissatisfaction with results obtained in dealing with family relief problems in which tuberculosis was a factor; a consciousness of relative failure and an earnest effort to do something constructive about this failure. The question was frankly raised whether in suitable cases tuberculosis can not be successfully treated as a family-problem without endangering the health of the well members. This idea resulted a few years ago in "The Home Hospital," an undertaking that was frankly an experiment, and the purpose of which is, to care for tuberculous patients in suitable surroundings and under proper supervision but without removing them from their families.

In brief, The Home Hospital is a large tenement building conducted under the auspices of the New York Association for Improving the Condition of the Poor. It contains apartments of two, three or more rooms, which are allotted to the families received, in accordance with the number of their members. The rooms are constructed according to the most approved hygienic and sanitary principles, having small balconies attached that are large enough to be occupied by the patients during the day or even may accommodate hospital-beds for complete open-air treatment. In every instance, the consumptive member of the family is allotted an individual bedroom, while his or her family is accommodated in the same apart-

ment. The building is provided with a large airy roof-garden divided into portions for patients, children's playgrounds, open-air school-grounds, open-air nursery, and so on.

In this home hospital, families are received and supported entirely or in part, according as one or more members of the family can not or can earn a portion of their living-expenses. These families are kept for as long as a year, and even longer if need so dictates, and are under the constant supervision of physicians and nurses, even to the extent of benefiting from the services of the dietician, while particularly the children are cared for and every effort is bent toward improving their condition and eradicating the tuberculosis infection to which they have been exposed and by which they may have suffered already.

This home-hospital experiment now looks back upon an experience of four and one-half years and has demonstrated that results secured in the treatment of actual patients compare, group by group, very favorably with those secured by the best hospitals, sanatoria, and preventoria.

A very interesting and instructive report covering the operation of The Home Hospital from March, 1912, to October, 1916, has recently been published and can be obtained from the New York Association for Improving the Condition of the Poor, 105 E. 22nd Street, New York City.

This experiment undoubtedly points the way to a more rational method of dealing with the socioeconomic problems of tuberculosis and deserves to be copied by all cities having tenement-problems of their own.

THE BABY CROP

Europe is studying with growing interest the steady decrease in her baby production. It is asserted that Germany is discussing polygamy and allied expedients, although the topic is censored from her publications. That she will adopt some such measure, if her political needs demand, may be assumed without argument—and that good little God of hers will follow the Kaiser, as usual. Linossier contributes a significant page on this matter to *Paris Médical*. The thing that awakens general alarm in France is, that in 1910 Germany added 880,000 to her numbers, while France lost 35,000. He proposes legislation embracing these points:

1. Every adult Frenchman owes the state three living children.

2. Every Frenchman who, for any reason whatsoever, dependant or independent of his will, does not pay this debt in nature's manner must pay it in cash, turning over to the treasury for each infant lacking the sum which it would cost in the social conditions in which he lives.

3. Each child can receive in heritage only one-third of its parents' estate at the most; if there are fewer than three, the surplus reverts to the state.

4. Every father of more than three children should receive from the state, from the product of this tax, an indemnity equivalent to the expense of education of his children in excess of three.

The proposition is based upon the assertion that French sterility is voluntary and due to the difficulty of meeting the expense connected with producing and rearing children. The celibate and the voluntarily childless household would have no legitimate grievance against the proposed law—it is a case of have babies or pay for substitutes, the same as in military conscription.

Such a law, with the general adoption of the twilight sleep or an equally efficacious method of alleviating the pangs of maternity, would soon restore to the European French the fertility manifested in a country, such as Canada, where there is room for expansion.

We seem to be outgrowing some of our infantilism. More than sixty thousand Canadians came down and fought for the Union during the Civil War. More than 100,000 Americans are now said to be fighting under the Canadian flag in Europe. The revolutionary hatred of England has subsided, and today most Americans feel that there are ties between us and the European Anglo-Saxons that are closer than the liens between either of us and any other country. But, the furnace-heat of the great war is dissolving many a prejudicial fence that had become obsolete and encumbering. The heroism of France has endeared her to the world. In studying the profoundly important question of her failing birthrate, we can not but realize the injury done her race by the loss of her colonies.

In this connection, it would be interesting to study the effect, upon the French of today, of their modern colonial development. Algiers, Tunis, Morocco, Madagascar, Farther India, all these have opened to the race an outlet for their surplus population and their surplus energies. How much has this had to do with developing the vitality that has frustrated the plans of the schemers who saw only a nation of *decadents* encumbering the "pleasant land of France"?

Leading Articles

The Causes and Treatment of Proctitis

By Charles J. Drueck, M. D., Chicago, Illinois
Professor of Rectal Diseases, Chicago Hospital College of Medicine; Rectal Surgeon, Fort Dearborn Hospital

EDITORIAL COMMENT.—The importance and baneful influence, upon the general wellbeing, of rectal affections, hardly can be overestimated. The series of helpful articles on this subject, which are being contributed by Doctor Drueck to "Clinical Medicine" are written in such a clear and practical manner that they cannot but prove of great service to practitioners.

PROCTITIS, or inflammation of the rectal mucosa, is of much more common occurrence than is generally supposed. Moreover, it requires careful diagnosis and prompt treatment.

The anatomy and physiology of the rectum and sigmoid gut render these organs very susceptible to catarrhal changes. The crypts in the mucous membrane are potential pockets for the lodgement of infectious material. The venous circulation, being in the opposite direction to the fecal current, always is sluggish. It also is in this part of the alimentary tract that the fluids are absorbed from the food débris. Here, toxins pass into the lymphatics and enter the circulation. As the fecal mass hardens, it excoriates and sometimes actually tears the mucous membrane as it is being expelled. These chemical and mechanical irritations, frequently repeated, result in catarrhal proctitis. As the rectum, sigmoid gut, and colon have the same structure and function, the same catarrhal disturbances affect all parts. However, it often is hard to explain just why the disease is so localized in a given case.

The start of these catarrhal changes sometimes is insidious and it may be impossible to define accurately the beginning pathological changes, because of the difference of temperament and habits in individuals. The prominent symptoms of inflammation in any part of the colon are referred reflexly to the rectum, and it may be added that the inflammation is seldom confined to any one locality. So-called catarrhal inflammation of the intestinal mucous membranes (an inflammation that can not be accounted for by the presence of any of the now known bacteria) is very common, especially in the cities, where modern methods of living subject persons to over-indulgence in highly seasoned and stimulating foods and the maintenance of high nervous tension, together with lack of outdoor exercise. Our individual powers of resistance vary so much that some seem to maintain good health in spite of these adverse conditions, while others become indisposed by the slightest exposure or indiscretion; even a change of drinking-water will, in certain individuals, light up a catarrh of the colon or rectum. Such inflammation may begin either at the cecum or the rectum and spread along the whole length of the colon.

Acute Proctitis

Acute catarrh of the rectum, like that involving any other mucous membrane, comes on suddenly, and it may usually be traced to a definite exciting cause. The onset is characterized by a chill and an elevation of temperature. There is a sensation of fulness, of weight, heat and burning in the rectum or, in severe cases, actual pain, which radiates to the sacrum, the other pelvic organs or down the thighs. Irritation of the trigonum vesicæ causes frequent micturition, tenesmus, and sometimes retention of the urine. The rectum feels full, the anal sphincters are contracted, and there is a constant and ineffectual desire to empty the bowels. The feces, usually liquid, are forcibly ejected through the small orifice. This constant straining produces prolapse of the mucous membrane, especially in children. The patient always is more comfortable lying down than when up and about. During the first twenty-four hours, the discharge from the rectum is liquid fecal matter; later, the engorged mucous membrane bleeds and the discharges are tinged with blood and contain mucus. In very severe cases, the mucous

membrane will ulcerate and pieces slough off, accompanied with considerable discharge of clear blood. From this time on, the discharges contain mucus and blood mixed with feces.

An early and persistent symptom is, the constant rectal tenesmus. The patient has a frequent and urgent desire to go to stool, but, each time voids only a few ounces of liquid material accompanied with much straining and pain. The anus is red and painful, the sphincter irritable and spastic, and the introduction of the examining-finger or the speculum is so painful as to necessitate an anesthetic. In the early stages, the parts feel dry, feverish, and swollen to the touch; later, after secretion has started, the surface is moist and slimy, but the walls are so swollen as to seem closely approximated. Specular examination at this stage reveals a bright-red, dry, and edematous mucous membrane, but, later, we find ulcerations. These ulcerations may be limited to one or two small points or there may be many foci, some of which may be quite deep and involve the whole thickness of the mucous membrane, even perforating the gut. When ulceration occurs above the peritoneal fold, it may cause peritonitis; when below that line, an abscess may result. Chronic or recurring proctitis in this way may cause a stricture.

Etiology of Acute Proctitis

Among the causes of proctitis, the following may be mentioned: Irritants directly attacking the mucous membrane, such as worms, highly seasoned foods or hard substances in the fecal mass, for instance, fish-bones and hulls of cereals. Fecal irritants are common causes both of the acute and the chronic type. Constipation and fecal impaction of the rectal pouch alternating with periods of liquid feces often induce a sudden inflammation of the sigmoid flexure and rectum, or the rectal disturbance may be an extension of colitis resulting from the passage of the irritating discharges from above. Seasonal changes of food or water, particularly during the summer, or sitting on a cold wet seat often are exciting causes. In all of these conditions, sudden and violent changes are important factors. Proctitis may result also from the use of strong purgatives, irritating suppositories or as an extension of inflammation from hemorrhoids, prolapse of, or eczema about the anus, or from disease of the neighboring organs, such as the bladder, prostate gland, vagina or uterus. In a few instances, newgrowths within the rectum, such as polypi, adenoma, villous growths, and papilloma, also intussusception occasion periodic exacerbations or protract the chronic proctitis.

Treatment of Acute Proctitis

The treatment of proctitis varies considerably with the exciting cause and, therefore, a thorough examination must be made before instituting any treatment. The parts being irritated and inflamed, the examination is very painful, unless an anesthetic, general or local, is administered. In many instances where for various reasons chloroform should not be given at the time of the examination, the patient may be relieved of most, if not all, of the pain by the application of a 2-percent solution of novocain. A general anesthetic has much in its favor, because, while the patient is thus asleep, the sphincter may be thoroughly dilated, in that way relieving the tenesmus and greatly facilitating subsequent examination or treatment. At the same time, any local trouble or cause of the proctitis may be removed, thereby accomplishing two things at one sitting.

The first indication for treatment naturally is, to remove the cause. Impacted feces or foreign bodies must be removed carefully so as not to injure the mucous membrane. The anal sphincters should be dilated, to permit easy and free emptying of the rectum. Decomposed, irritating infectious intestinal contents should be removed by means of a saline cathartic, which should be taken in sufficient doses to produce watery stools and a free flushing. After the bowel has been thoroughly emptied, it should be irrigated two or three times during the day with physiologic salt solution at 110 degrees.

For this irrigation, the patient should be placed in the lateral prone position, with the hips elevated; the irrigator-reservoir being held one and one-half or two feet above the body. The irrigator-tip should have a large return-flow, to allow free exit of débris. The solution is allowed to run into the bowel at a slow rate. Douching in this manner washes out a large amount of infectious material, such as secretions, fecal accumulations, and multitudes of microorganisms; it dissolves mucus and pus, flushing them out as shreds; also it contracts the vascular structures, thereby stimulating circulation, relieving the local congestion, and depleting the tissues.

Following the douche, about 2 drams of astringent antiseptics or other medicinal mixture is injected and the patient is in-

structed to retain it; a 1 : 5000 silver-nitrate solution being the most reliable. If the pain and tenesmus are not relieved, a 1-2-grain opium suppository may be inserted. These flushings are to be continued as long as there is any discharge of mucus or pus. Enemas cannot be substituted for the irrigation, as they increase the tenesmus.

If the symptoms continue after the third day under this treatment, it will be found there are ulcers on the rectal wall, and these then must be treated locally. The patient is placed in the knee-chest position (which secures obtaining atmospheric dilatation), then a speculum is introduced and the entire rectum inspected. Any ulcer present is wiped free of mucus or débris and painted with pure ichthyol or a 5-percent silver-nitrate solution.

The Diet in Acute Proctitis

The diet should be carefully arranged so as to be absorbable and nonirritating and of such a variety as will insure soft or semisolid evacuations. A largely absorbable dietary is advisable also, in order that the bowels may move less frequently, thus diminishing the deleterious peristaltic movements. Milk should be excluded, because it gives rise to hard, irritating curds in the feces. Fibrous vegetables, such as cabbage, kraut, celery, and green corn also are forbidden, for, they irritate the bowel. In their stead, gruels of oatmeal, rice, barley, egg-albumen, gelatin, meat-broths, and the proprietary prepared foods and peptones should be ordered. Water should be drank freely and a full glass of flaxseed-tea at night. This latter acts as a mild laxative, while also soothing the intestine.

The patient should be kept in bed until all pus and blood has disappeared from the stools, because, when he is up and about, the pendent position of the blood-vessels, together with the thinness of their walls and the associated congestion and inflammation, give rise to venous stasis, which seriously impedes or even prevents regenerative changes.

The Prognosis for Acute Proctitis

Proctitis in either the acute or chronic form is always a serious matter, deserving of the physician's most careful attention, because the inflammation itself may debilitate, and especially because complications that may invalid the patient are prone to occur.

Each case is a law unto itself. Under rest and treatment, the symptoms subside and the patient recovers in a week or ten days; if not properly managed, the condition may become chronic. If the mucous membrane alone is involved, a complete recovery results, even though ulceration has occurred; however, there always is danger of perirectal abscess, fistula or stricture of the rectum. Sometimes lymphangitis or phlebitis may protract convalescence.

Chronic Proctitis

The acute proctitis, if neglected, merges into the chronic, hypertrophic form and eventuates in the atrophic condition. The hypertrophic form of proctitis is the less commonly encountered. It may begin as a sequel of acute proctitis, although it frequently results from diseased conditions of the organs outside of the bowel, such as pressure upon the sigmoid flexure by abdominal tumors, a movable kidney, a displaced uterus or by adhesive bands of pelvic cellulitis. The inflammatory changes are not confined to the rectum, but extend also to the sigmoid flexure and colon, thus complicating the pathological process.

Symptoms of Chronic Proctitis

Where this condition succeeds, the acute catarrh, the sharp pains, tenesmus, and diarrhea of the early days subside to a less severe though chronic form. When it is owing to some extraintestinal disturbance, the symptoms begin insidiously and the patient will have been ill a long while, and by the time he presents himself will be complaining of flatulence, colic, and tenesmus and will have a white-coated, tooth-marked tongue,irregular and unsatisfactory bowel movements, and periods of soft or semifluid stools mixed with mucopus and these alternating with periods of constipation, when hard, round, ball-like stools streaked with mucopus are passed. During the diarrheal periods, colicky tenesmus-pains sometimes are followed by an evacuation of thick, glairy mucus or mucopus containing blood. This secretion of mucus may be so abundant that it continually oozes through the sphincter and thus keeps the anus constantly moist, thereby necessitating the wearing of a napkin, besides inducing erythema and pruritus. This loss of mucus is very exhausting. After each stool there is a feeling of incomplete evacuation and the patient soon becomes neurasthenic. The mucous membrane now is edematous and covered with shreds of mucopus. The swollen membrane seems to fill the whole rectum and when a perforated speculum is intro-

duced its orifices are filled with congested mucosa.

Treatment of Chronic Proctitis

The treatment of this affliction is long and tedious. When some other pelvic or abdominal organ obviously is at fault, that, of course, must first be corrected; until the exact cause of the disturbance has been definitely ascertained, our prognosis must be guarded. When satisfied that the proctitis is owing to disturbances within the bowel, the treatment is that of acute proctitis.

Atrophic Proctitis

Atrophic changes in the rectum are much more common than the hypertrophic ones, are chronic in character and do not extend above the sigmoid flexure. Syphilis is an underlying factor in most, if not all, of these cases, and it must be considered when beginning treatment.

The Symptoms of Atrophic Proctitis

These patients are severely constipated and have grown accustomed to drastic cathartics. Furthermore, as a rule, they overeat and underexercise. The tongue is coated a dirty-yellow and the breath is foul. The appetite is poor, and the patient loses weight and becomes melancholic. The stools are dry, hard and lumpy and streaked with mucus, blood or pus. Following each bowel movement, there is a sensation of heat or burning in the sacrum and rectum. The sphincters are irritable and spastically contracted to such an extent that the introduction of the examining-finger or the speculum gives much pain. The mucous membrane at the anal outlet is scratched and abraded; however, these small wounds heal readily, and they must not be mistaken for fissures. Generally there is anal pruritus; also, since the skin of the entire body is dry and harsh, owing to the systemic intoxication, pruritus often is general. Hemorrhoids are almost always present and may be mistaken for the cause of the trouble; yet, if they are removed, the other symptoms continue unrelieved.

The rectal mucous membrane will be found bright-red, rough, dry, shiny, and inelastic, but not swollen and edematous as in the hypertrophic form. Spots of granulation or ulceration, some having inspissated feces attached, will be seen, sometimes in considerable number. The examining-finger finds the ampulla ballooned out, so that the walls hardly can be felt. Here, we often find hard, dry masses of impacted feces upon the ulcerated surface.

The Treatment of Atrophic Proctitis

Medication by mouth is not satisfactory, except that by diligence we may prevent irritating and infectious material from passing through the bowels, while the judicious use of tonics, such as the syrup of iodide of iron, the hypophosphites, malt-extract, and cod-liver-oil, will help to build up the individual. When tonics are prescribed, they must be continued for long periods. Outdoor exercise and regular habits are of much value in assisting any tonic treatment. The diet must be carefully selected, in order to insure soft, nonirritating stools. Coffee, tea, alcohol, and tobacco are to be excluded, while potatoes, sugars, and starch-foods must be eaten in moderation, because of their tendency to produce intestinal fermentation. All drastic cathartics must be discontinued, the colon being kept empty by means of lavage. The upper gut may need occasional stimulation with alkalis or cascara.

In every case, syphilis must be examined for, including a thorough blood examination, and, if found, treated by means of inunctions, hypodermics or intravenous administration, rather than by giving mercury by mouth, as the latter method keeps up a teasing peristalsis and diarrhea.

The Local Treatment of Atrophic Proctitis

Each day the rectum is thoroughly emptied with enemas or irrigations, after which adherent strips of mucus or inspissated fecal masses are removed with a swab, through the speculum, and the granulated or ulcerated spots brushed with a 2-percent solution of argyrol.

When the disease extends up into the sigmoid flexure, the patient is placed in the knee-chest position and the pneumatic sigmoidoscope is well introduced; then 1 ounce of a 2-percent argyrol-solution is introduced high up into the flexure. The speculum now is withdrawn and the patient let down on his side. Peristalsis soon spreads the solution over all of the sigmoid gut and the rectum. These treatments should be given daily at first, but later, as improvement occurs, at longer intervals. When the daily flushings and applications are decreased, the mucosa should be kept lubricated by injecting, each night, 3 ounces of liquid paraffin containing 1-2 percent of menthol. This soothes the bowel and lubricates the descending fecal bolus, so that it is voided more easily.

The General Practitioner in His Relation to Practical Psychiatry

III. Mania and Paresis

By Leon E. Duval, M. D., Washington, D. C.
Government Hospital for the Insane, Washington, D. C.

EDITORIAL COMMENT.—Doctor Duval very kindly has offered to answer any questions regarding problems treated in this and other papers, that may be asked of him by readers of "Clinical Medicine." Such letters may be enclosed to us and we will forward them to Doctor Duval. His answers will be published from time to time in this journal.

Manic-Depressive Insanity and the Manic-Depressive Personality

UP TO the time of Kraeplin, psychiatrists grouped mania, melancholia, and the periodic insanities as separate entities. Kraeplin, however, pointed out the fact that there are certain fundamental symptoms which are found in all of these cases, the differences between them lying only in the order of occurrence or grouping of the phases and the combination of symptoms in any particular case. The manic and the depressive phases may occur singly, one may follow the other, there may be a normal interval between the two phases or any combination of the manic, depressive, and normal phases. The symptoms of a manic phase may occur simultaneously with those of a depressive phase, the socalled mixed type. Each case is a law unto itself, but, in a given case, the attacks are of approximately the same length and character and the course of the first attack will be closely duplicated in the subsequent ones. We can usually predict a recovery from the individual attack, but, we must also expect that, as a rule, other attacks will occur in time. This is one of the basic diagnostic characteristics of the disease.

This disease is inherently constitutional and hereditary. We find it in successive generations and in two or more individuals of the same generation. Very frequently we find certain apparently precipitating factors preceding the attack, and in a given case they usually are the same at each outbreak. A family quarrel, an unhappy love affair, impotence or other sexual upsets, unfortunate business affairs or alcoholic overindulgence are frequent precipitating factors. On the other hand, the attack may come on spontaneously, with absolutely no discoverable precipitating cause.

At this point, it may not be inappropriate to say that we should carefully seek for precipitating factors, even when the attack apparently is without cause, and attempt to remove them, if discovered. Thus, one must carefully interrogate close associates and the patient himself during his normal periods. In institutions, it is the practice of some psychiatrists to record the patient's utterances during the psychosis and then, in the normal period, to question him as to their meaning.

Since these patients do not deteriorate mentally and have, as a rule, some insight into their affliction, we are able, by means of association-tests and other psychoanalytic methods, to analyze the patient's inner life and bring forth from the depths of his unconscious mind the things that he is not able to tell us of his own volition. In this manner, we determine his inner conflicts, his suppressed desires, his unexpressed and unrealized ambitions and repressions, and by the very explainings of these unrealized mental processes very often bring great relief. Mind, I do not say, every case; for, since this method really constitutes psychoanalysis, it is important that the patient be intelligent, fairly well educated, and ready to cooperate with the physician to the best of his ability. However, those possessing these requirements constitute only a small portion of these patients, while the number of physicians who understand these methods is as yet limited.

The symptoms of both phases of this psychosis are but *exaggerations of normal traits*. We all have sat at some congenial dinner-party, where mirth and general hilarity prevailed and the psychic states of the participants were akin to a mild hypomanic state. Also, we all have seen a person stricken by the death of a loved one sit listlessly around, with marked depression pictured upon the countenance and without any inclination to physical or mental effort. This is a mild depression, and the only difference between it and a psychotic or pathological depression is one of degree and duration. The manic-depressive is natural in his elation. He appeals to you as sincere in

his attitude. As one of my preceptors used to put it, "You can meet him halfway." He is keenly alive to everything in his environment. This is in contrast to the unnatural emotional state and the lack of comprehension of the surroundings seen in the dementia-præcox victims. The extremely depressed patient, who sits still all day in one place, lacking totally in initiative, never speaking, apparently paying not the least attention to his surroundings, is able, in the subsequent normal period, to relate everything that occurred about him during his psychotic attack.

The Manic Personality

The type of individual who is liable to develop the manic phase or in whom the manic symptoms are more pronounced generally, in his normal life is jolly, overvivacious, restless, easily excitable, and irritable. He is impulsive and prone to yield to his impulses. It has been said that the normal mental state of such individuals is one of a mild manic or hypomanic character, a condition of moderate elation and overactivity.

At the onset of the manic attack, one who knows what to look for will observe certain ominous signs, while to the casual or untrained observer there is nothing especially noticeable in the subject's conduct. As a rule, he is active and does an increased and uncalled-for amount of hurrying from place to place and from task to task. At first, his activities are of a reasonable nature, however, he really is less efficient than before and does not accomplish as much. He is irritable and unreasonable, yet, at times, too jolly and vivacious, restless, and unsettled. He may carry on his business for a time with more or less judgment, but, sooner or later some foolish or impulsive act will call attention to his mental state.

There are three cardinal symptoms the various degrees and combinations of which make up the symptomatology of the manic phase. These are: (1) emotional elation, (2) increased psychomotor activity, and (3) flight of ideas and distractibility of attention. Hallucinations and delusions may be present, but, are likely to be fleeting in character and by no means are a constant symptom. Occasionally there are delusions of persecution of fairly fixed character, which render difficult the differentiation from other psychoses including paranoid elements.

The Depressive Personality

The depressive type of individual in his normal state more often is very quiet by nature, retiring, hypochondriacal and easily reacts to depressing factors even of slight degree. At the onset of the depressive attack, he is merely lowspirited, but goes about his work. Sooner or later, he begins to become disinclined to physical or mental effort and tends to sit and brood for hours at a time.

The cardinal symptoms of the depressive phase, in contrast with those of the manic phase, are: (1) emotional depression, often with ideas of unworthiness and the delusion of having committed an unpardonable sin, (2) retardation of psychomotor activity, with lack of initiative, and (3) slowness and difficulty in all the mental processes. These occur in varying degrees and combinations.

I will not go further into the symptomatology of this psychosis, as that is not the purpose of this article and would unduly lengthen it. In differentiating it from other psychoses presenting symptoms resembling mania or melancholia or from cases of manic-depressive insanity that resemble dementia præcox, especially the catatonic type, we depend upon the cardinal symptoms mentioned above, and upon the course of events. In virtually no other psychosis do we have *recurrent attacks of mental upsets, with complete recovery between*, and *the absence of mental deterioration*. It is upon this syndrome that we base our diagnosis of this disorder.

As to the prognosis, one must be guarded until he has seen the patient through one or more attacks. No two cases are exactly alike. The length of the attack, the mode of onset, the duration of the normal interval, the possibility of removing the precipitating factors or of teaching the patient to avoid them, the amount of extraversion, the proportion of mental stability, and the amount of adaptability to unpleasant situations, all these must be taken into consideration. And even then the prognosis may be belied by the subsequent course of events. In the case of patients who are unstable, who react to slight precipitating causes, in whose case the precipitating cause can not be removed or who are unable to adapt themselves to unfortunate circumstances, the prognosis is not good. On the other hand, if the individual is able to adapt himself to circumstances, if he can be given a good insight, if the precipitating factors are removable, and if the patient is fairly stable, we may offer more hope.

Treatment of these patients primarily should be institutional, in order to remove them from the environment in which the attacks have occurred, and also to give them

the benefit of observation by trained psychiatrists in daily contact with them. In this as in every other psychosis, if the patient is treated at home, his relatives and friends will cater to his whims or, not understanding mental disease, prolong or aggravate the disorder unwittingly by blunders of speech or conduct. The psychological effect of new surroundings, of the hospital-atmosphere, and of contact with physicians and nurses who know the proper attitude to take toward such sufferers is of inestimable value and really hastens the return to the normal state. And, I repeat, in certain selected cases, psychoanalysis offers hope of permanent relief.

Let us now take up the early diagnosis of another widespread disease of uniformly bad prognosis, one that in its early stages may easily be overlooked or which may closely resemble other, less harmful psychoses. I refer to paresis.

Paresis

About this subject of paresis a volume might be written—no other mental disease is so protean in its manifestations; however, I shall be able to give only some of the more important diagnostic features. Many of these cases are not recognized until the victims have reached the autopsy-table. Since from the standpoint of the general practitioner the morbid anatomy of this malady is of little interest, I shall not discuss this feature at this time.

A rather frequent mode of onset of paresis is a manic-like attack, so like a real mania as to be difficult to distinguish it from the latter; an experienced observer, however, will note certain differences between the two. The manic is self-sufficient, elated, and exhibits a certain amount of grandiosity; still, his ideas do not show the same exaggeration and impossibility as those of the paretic. The manic is rich and full of business-schemes, while the paretic possesses billions and does not try to account for their acquisition, never questioning himself as to how he accumulated his immense possessions. The manic is natural in attitude, not lacking in concern for himself; the paretic, on the other hand, does not realize that he is any different from what he always has been and takes everything in a careless, matter-of-fact way.

Let me pause here to emphasize the fact that delusions of grandeur are, by no means, an essential symptom of paresis, as many physicians seem to think. They are present in a number of cases, but, as observed in institutions, a large number of paretics never have any grandiose ideas. Of a series of about 100 cases of paresis observed by myself, not more than 5 subjects had true grandiose delusions. I have under observation at present one early paretic who every day writes on an average a dozen letters in reference to large business-schemes that he intends to carry out when he leaves the hospital. He estimates that he will have an income of $20,000 a year from such business planned, and he seems to have convinced his wife of his good prospects for the future. He has no true delusions of grandeur, but simply shows a manic-like overactivity, with numerous perfectly reasonable schemes, the realization of which, however, seems improbable.

The onset of this disease may resemble almost any psychosis. Early cases often are called dementia præcox, manic-depressive insanity, alcoholic psychoses, paranoia, and the like. We must not overlook the fact that alcoholism is a frequent symptom of the early stage of the disease, and the first symptoms apparently often are nothing more than the results of alcoholic abuse. Dementia is a very constant symptom, being progressive in nature, although not infrequently supervening so gradually as to be overlooked.

The most constant and the most observable feature of this disease manifested before any other symptom is, a change in the patient's personality, morals, and judgment. The disease strikes the subject in the midst of the best years of his life, producing quite unaccountable changes in his makeup. The most highly respected citizen, the loving husband and father, one of good morals and sound judgment begins to show unexplainable lapses in his conduct. Previously abstemious and true to his marital vows, he becomes a drunkard, a companion of prostitutes, and indulges in sexual excesses. In his business, he makes poor investments, goes into all sorts of wildcat schemes, and falls an easy victim to any business-sharper that happens to discover his incapacity. His whole personality is changed. His conduct becomes subject to swift and unlooked-for variations. He often is irritable, perhaps impulsive. Many crimes are committed by paretics, and it is not until after they are sent to prison that it is discovered that they are not responsible for their misdeeds, because of mental disease. For this reason, it is vitally important that the disease be recognized at its onset and the patient be confined, to prevent antisocial acts on his part.

[*To be continued.*]

The Problem of Senility

By A. L. Benedict, A. M., M. D., Buffalo, New York
Editor, "Buffalo Medical Journal"

EDITORIAL COMMENT.—The problems involved in the recognition and treatment of diseases observed in the senile are peculiar to themselves in many respects, in so far as the senile organism responds to disease causes differently from the growing child-organism and the vigorous adult body. A study of the causes and nature of senility, therefore, is essential for a true understanding of these problems.

THIS is not a scientific article, but it includes some observations and queries that may be of interest to the readers of this magazine.

Senility may be asserted to be an adequate cause of death. It is, indeed, the one strictly natural cause of death that is not traumatic. While often used in death-certificates in a loose way and for ages not sufficiently advanced, senility may be held to be more essentially the cause of death than might be, say, bronchitis or even fracture of the neck of the femur or pneumonia. That is to say, the pathologic intercurrent process, though overthrowing the balance of resistance, would not be sufficient to do so except for advanced age, if, indeed, it would have developed at all but for the existence of factors essentially due to senility, as, for example, the condition of circulation in determining a pneumonic process from causes otherwise inadequate.

As to Geromorphism, or Presenility

It is unnecessary to dilate on the fact that different individuals age at different rates, just as do different species of animals, on an average basis. Maturation and senility occurring at ages far short of the average are termed geromorphism, but, it does not appear that any exact limitations to the use of this term have been established or that the term can be graded according to degree of aging or used except in a somewhat arbitrary way to apply to extreme cases. In a certain sense, precocity may be considered a low degree of geromorphism, but, so far as the writer's observations go, precocity does not bear any necessary relation to presenility. Precocity may be defined as an exceptionally early developmert of any mental or physical standard of human attainment up to that of full adult life.

Among the common standards, may be mentioned dentition, hirsuties of any part of the body, mammary and other sexual developments, along with the physiologic manifestations of such development in the way of puberty, menstruation, pregnancy, the attainment of full stature or of any given stature or other physical standard in a relative sense, as compared with the average. Ossification, especially since its detection has been rendered possible by radiography, may also be considered a test of precocity. Mental precocity is commonly measured by such tests as the ability to talk, to walk, and to conform to the ordinary graded-school and college requirements. While we often speak of precocious menopause, whitening or loss of hair or even of precocious senility or of any quasi pathologic feature of senility, such as arteriosclerosis, even extending the term to the occurrence of cancer, it should be clearly understood that the words precocious and precocity, unless distinctly qualified in some such way, apply only to early life, up to the attainment of physical and mental standards of the adult.

So far as the writer has observed, mental and physical precocity are entirely independent. No reference is made in this statement to instances of permanent failure of mental development, so that persons of full adult age may be classified as having the mentality of 8, 12 or 16 years, but solely to persons who ultimately reach at least the lower limit of normal mental and physical development and within the maximum normal time limit. It is only a recognition of this independence, to concede that mental and physical precocity often coexist and that mental and physical development may proceed at equal rates.

It may further be asserted that different phases of mental development may be independent as to relative rates. For example, a person may early develop great intellectual power along the line of some science or other study and, yet, be extremely childish in social habits, as a girl, carrying on the ordinary senior high-school studies at the age of 14, but playing with dolls; or various musical and mathematical prodigies—mainly exemplified among males—exceeding at an early age the usual attainments of adults, but enjoying the usual games of boys. With or without actual precocity, we often observe very great discrepancies between the ability of men and women for the performance of purely intellectual tasks or the conduct of

business and their predilections so far as recreation and social life are concerned.

It is altogether probable that the independence of physical and mental precocity or of different phases of mental precocity would be still more manifest, if it were not for the deliberate attempt of the individual or of those influencing him to bring the various phases of development into apparent harmony. For example, the boy or girl who early reaches adult stature and manifests the external sexual phases of development of form and hirsuties is dressed to conform to the apparent age and is trained to conduct himself or herself accordingly, and, even, to reach, by excess of application, a corresponding grade in school.

Contrary to what might naturally be expected, the writer's observation is to the effect that, excluding the reported extreme cases of geromorphism with which he has had no personal experience, precocity has no determining influence on the age at which senile changes occur or on the degree to which the ordinary senile characteristics are present at any given age. As in regard to the statement that the different phases of precocity are independent, precocity and senility are independent in the sense that they may or may not agree in their incidence. The precocious youth may continue to be "old for his age" throughout life and thus may early manifest senile changes and die at a comparatively early age without regard to an accidental or intercurrent cause of death, but, he also may enjoy a long life, without premature senility; after catching up in actual age, with a physical or mental maturity reached early, he may retain the physical and mental appearances and characteristics of this age for an unusually long period. On the other hand, the individual who matured slowly, either mentally or physically, or in both respects, may either show a correspondingly slow development of later maturation and of senility or he may age rapidly after a comparatively short period of optimal adult life.

The important point is not, to consider that there is either a direct or an inverse ratio between early and late rates of change, but, the two are entirely independent so far as any general rule is applicable. One qualification may be made. The precocious youth is likely to assume early the mental and physical burdens of adult life, and it is plausible to assume that after a certain number of years the vital forces are exhausted to an approximately equal degree. It may further be assumed that, if the precocity is mental or even if it is physical, in the sense of stature, hirsuties, and so on, these burdens are assumed at an age when the physical powers have not been sufficiently developed to withstand them as well as at the average age at which they are imposed. On the contrary, slow development, especially mental or of extrinsic physical nature, not only shortens the period of adult strain at its beginning, but postpones it till the powers of endurance have been fully attained.

Thus, without any essential association between precocity and presenility and shortness of life or the opposite conditions, there may be an actual association, if we regard senility as owing to the exhaustion in a fairly definite period of a fairly definite capital of resistance. But, even this qualification is not necessarily applicable. For example, the writer recalls a man who, at the age of 15, was conducting an independent business, was married and shortly afterward had the responsibility of caring for children. Yet, at 40, he apparently was only 30, not only in physical characteristics, but in vitality. Another acquaintance, who was graduated from high school at the age when many boys just enter, and who took the highest honors, showed no signs of early exhaustion of vitality, although it must be admitted that he did not surpass the intellectual and business standards of the average man at 40 or 50. Two other acquaintances, who completed, with honors, the medical course at the age of 20, are, at 50, rather young in physical appearnace and activities and of reputations fairly commensurate with their college standing, one of them having also been handicapped by a very serious illness in early adult life. Somewhat similar instances might also be adduced for women.

Some Causes of Premature Senilizing

Without special regard to precocity, either mental or physical, it may be seriously questioned whether senile changes can be regarded as in any definite proportionate sense due to the exhaustion, caused by a fairly definite amount of strain of a fairly definite amount of vital capital. It is unquestionably true that, if we contrast the average poor working man or woman with the business or professional man or woman or the woman leading the domestic life appropriate to her circumstances, we observe an average greater degree of senile characteristics at a given age in the former, and that the contrast is even greater for women than

for men. So, too, if we contrast what is commonly considered the normal, comfortable, but busy and fairly simple life with that marked by excess and idleness, we will find a marked average advantage on the part of the former.

However, short of actual excess of strain or deprivation, on the one hand, or of dissipation, on the other, it may be questioned whether there is any marked difference in actual average longevity. For example, let us imagine three boys or girls of the same age, perhaps classmates in a public school as little children, one boy becoming a laborer, one a lawyer, teacher or physician, and one a typical society-man, and each marrying one of the girls. At 50, the second one and his wife would probably appear ten years younger than either of the other couples—barring the artificial devices available for women to conceal the ravages of time. Still, unless we suppose the first couple to have been subjected to an unusual physical strain, actual lack of food or extremely unhygienic conditions, or the third to have indulged in dissipations which directly produce disease or undermine the resistance, there will not be much difference in their probable longevity. This is, of course, merely a way of stating a general contention, and in any particular cases it may be corroborated or disproved by concrete results.

Within reasonable limits, factors of strain that might presumably cause presenility and shorten life so often fail to do so that one is tempted to deny their action. For example, a woman supposed to be tuberculous in early life and who, at any rate, was born at the seventh month and almost an invalid up to the age of 35, is alive and active at an age close on to 80, and, yet, apparently not much more than 50. A man, who went to work as a boy of 12 and who had an exceedingly arduous business life that involved very early rising and long hours, finally retired at the age of 84. Of five class mates now over 50, the only one who may be considered to be getting old, either physically or mentally, is the one who has had the least worry over finances, the least strenuous business life, and the most peaceable domestic life. Even syphilis and alcoholism and other serious diseases and handicaps often fail to produce the legitimate result. Irregular habits, short of actual excesses and dissipations, seem rather to postpone mental senility (though this statement may put the cart before the horse) and perhaps physically. If, as is implied by many writers, senility depends largely upon the condition of the arteries, it may be questioned whether varying states of strain in general, with their constant demand for rapid adjustments of arterial pressure, do not constitute a form of exercise that delays senility. Such assertion, however, must be made with an obvious qualification and with some hesitation.

[*To be continued.*]

What the General Practitioner Can Do in the Treatment of Chronic Diseases

Chronic Diseases of the Heart

By George F. Butler, M. D., Kramer, Indiana
Medical Director of Mudlavia, Kramer, Indiana

[*Continued from April issue, page 284.*]

IN DISCUSSING chronic cardiac diseases, it is almost necessary that I should write a few words about the acute manifestations, since chronic heart affections are almost always preceded by acute attacks, and one must be familiar with the management of the acute trouble in order to deal intelligently with a chronic condition.

Diseases of the Myocardium

Myocarditis.—This disease generally is an accompaniment of a variety of acute infections—typhoid fever, pneumonia, smallpox, diphtheria, influenza, rheumatic fever, and the like; malnutrition, acute articular rheumatism, and chronic anemias also often lead to it. The main symptoms are: a weak first sound at the apex, a weak second aortic sound, embryocardia, low blood pressure, and a slow, soft, feeble pulse.

Fatty Degeneration.—Medically, very little can be done, except symptomatically. In the treatment of established myocarditis, it is necessary to distinguish whether the fatty infiltration of the heart-muscle is the result of degeneration of the muscle-fibers or springs from an interposition of fat between

intact muscle bundles; the latter condition usually being combined with a fatty overgrowth about the heart and standing, commonly, as a symptom of general obesity. Although the symptoms of fatty heart and true heart degeneration are similar, the treatment of the two is not the same.

Acute Myocarditis.—The digestion should be kept in good condition by means of proper feeding. The patient should be afforded absolute rest both of body and mind, while cupping, leeches or plasters may be applied, for counterirritation, over the precordium. Alcoholic stimulants and tonics may be given, and strychnine, in very small doses, for its general tonic value. Digitalis, which is of use principally for diagnostic purposes—although it also has a passing beneficial effect—must be given with caution in this disease; which is true, also, for all cardiac tonics. For its effect upon the nervous system, opium may be administered.

Chronic Myocarditis.—Treatment is merely palliative in chronic myocarditis, because of the fibroid degeneration and atrophy of the heart-muscle. The general health should be kept up by means of a generous diet, while alcohol, tea, and coffee are to be avoided, as well as tobacco. Also, Fowler's solution of arsenic should be given, starting with two or three drops a day and gradually increasing the amount up to twenty or even thirty drops a day, and then slowly descending to the original two or three drops; repeating this course several times, if necessary. If cardiac tonics are employed at all, it should be under strict medical supervision. A course of arsenic often acts as a valuable tonic. All violent exercise, emotional shocks, worry, and the like, must be avoided. Anemia must be met by giving appropriate remedies. Flatulency and constipation should be counteracted.

Diseases of the Endocardium

Endocarditis.—Although it is possible for acute endocarditis to present itself as a primary disorder, it usually occurs as a complication of some one of a variety of general diseases, such as scarlet-fever, pneumonia, gonorrhea, erysipelas, and so on, and, therefore, its prevention is identical with the treatment of the causative diseases.

Knowing, as we do, that very often the source of infection is the mouth or intestine, any condition of oral sepsis should be rigorously treated. Large unhealthy tonsils should be removed, as these form a suitable nidus for infective organisms. Careful regulation of the bowel, also, by preventing the retention of fecal matter, must tend to lessen the chances of infection from that quarter.

When ulcerative endocarditis occurs in the course of septicemia and puerperal pyemia (septic endocarditis), we can expect very little good from medicine, still, orthocresol, quinine, and mercury bichloride are recommended as worthy of trial. Also quinine, the sulphate or the hydrochloride, may be given in combination with mercury bichloride. The most satisfactory results from drugs have been obtained from the use of collargol and protargol by inunction.

In the rheumatic form, salicylates combined with alkalis or preferably the alkaline-quinine treatment may be used, because of the possibility of myocardial complications. In the syphilitic form of endocarditis, the usual antiluetic medication must be employed. Throughout the course of the endocarditis, absolute rest in bed is essential. Also, cold should be applied to the precordium, either continuously or with interruptions, the latter generally being preferable. The treatment must vary according to the stage of development.

Medical treatment at first should be directed toward maintaining the tone of the heart, the best remedy for which is the tincture of aconite, one to five drops every two or three hours. Aconite is especially valuable in sthenic cases when the heart beats fast and strong. In a more advanced stage, where the heart begins to fail and stasis or hydrops in different organs appears, the indications are for digitalis.

The diet, in acute endocarditis, should be made up largely of milk, gruels, broths, fresh fruits and vegetables, a few crackers, and a little roast meat. Because of the valvular heart lesions that usually remain, the treatment during convalescence should be the same as in compensated or decompensated lesions of the heart.

When the endocarditis is the result of some definitely known infection, a vaccine made from a culture of the same will be found of great value. When of doubtful bacteriology, Van Cott's mixed bacterins may be injected, on the ground that as a rule there exist mixed infections of streptococci, pneumococci, and staphylococci.

Myocardial Insufficiency

Acute insufficiency of the heart may result either from deficient systole or deficient diastolic dilatation. The treatment for dificient diastole will be found in connection

with the treatment described in the chapter on diseases of the pericardium. Asystole is due either to some acute myocardial condition or to withdrawal of much blood from the heart, the absence of its normal contracting stimulus causing systolic death. The cause of this condition in the myocardium—of acute myocarditis and of acute dilatation of the heart—is undue heart strain. Although but little can be done for asystolia, we may try cardiac stimulants—musk, camphor, ether. For the improvement of the general tone, strychnine may be given in small doses. Injections of digitalis also are permissible. To obtund afferent impulses and control suffering, morphine may have to be added. Sometimes either hot or cold applications afford comfort to the patient, who should be placed in bed, if possible, and at all events must be kept quiet on his back. While it is not necessary to give digitalis or strophanthus in a routine way in every case of pertussis or pseudopertussis. these remedies are valuable to improve the systole. Asystole arising from improper innervation of the heart is beyond our reach, but asystole from hemorrhage may be prevented by the introduction of large quantities of physiologic salt-solution into the circulation.

In the infectious diseases, the mechanism of the production of asystolia has been established for diphtheria and pneumococcus-infection; the toxins of these bacteria affecting the vasomotor center in the medulla and thus producing dilatation of the blood-vessels and death in a very short time. However, it is only in diphtheria that the toxin produces changes in the myocardium itself. In different parts of the body, the blood-vessels are differently affected, being found empty in the brain, the muscles and skin, while all the vessels supplied by the splanchnic nerve are overfilled. This latter state explains all the clinical symptoms, the enormous lowering of blood pressure, and systolic death. For, the overfilling of all the blood-vessels supplied by the splanchnic nerve represents a loss of blood to the general circulation, and this must lead to asystolia, as the heart bleeds itself into these blood-vessels, so that its normal stimulation to contraction is removed. This also is the mechanism in other diseases, as, for instance, in typhoid fever, in influenza, in sepsis, and possibly in other infections; also in shock, particularly after abdominal operations.

For the relief of this condition in pneumococcus-infection, caffeine seems best adapted, its use being followed by the most satisfactory and lasting results, although camphor is of some value and strychnine produces good effects when administered in large doses. Massage of the abdomen is valuable, also a good temporary effect may be attained by infusion of physiologic salt-solution. For vasoconstriction, the best remedies undoubtedly are adrenalin and caffeine, given hypodermically. Although adrenalin, especially, contracts the blood-vessels supplied by the splanchnic nerve, its effects are only transitory, so that it must be given frequently, say, every two hours or so. Using the 1 : 1000 solution, from 1 to 1.5 mils (Cc.) is administered per dose (Forchheimer).

During convalescence, these patients, as a rule, should be regarded as having chronic myocardial insufficiency, and great care must be taken of them, each according to the indications.

Now as to the chronic form of insufficiency. Every valvular lesion leads in time to myocardial insufficiency, in which there are two stages, namely, compensation and myocardial insufficiency. The latter stage, again, may be divided into two stages, the first being characterized by the milder symptoms of circulatory disturbance, the second by dilatations of the heart and edema or anasarca, these symptoms arising from venous stasis and disturbances of nutrition. In any of these conditions, the circulation may be reestablished in a greater or less measure, the one exception being cardiac cachexia. Here, the heart no longer reacts to remedies and the most that can be hoped for is, some improvement through treatment of the symptoms.

As for prophylaxis, regularity of life is the safeguard here as everywhere. The chief object is, to maintain normal nutrition of the myocardium by means of proper feeding, exercise, stimulation of normal nervous impulses, judicious treatment of all affections that may force increased labor upon the heart, and so on. All excessive effort must be avoided, either mental or physical; much wine and venery are absolutely prohibited; the various toxic conditions should be treated; syphilis demands radical measures.

The diet prescribed should aim to maintain a normal metabolism. The special conditions are, that the patient should remain at about his normal weight, that he avoid chronic intoxications, and guard against frequent attacks of gastrointestinal troubles. Coffee and tea may be drunk every day in small quantities, but it is important that the use of alcoholics—while they may be used

in moderation—does not become a habit. Use of tobacco may be continued, but avoiding excess. Although there are conditions in which a physician should advise celibacy, each case must be taken at its individual value. For the man, the danger in wedlock lies in excessive sexual intercourse. For the woman, the states of pregnancy and parturition are the vital ones in this disease. On the whole, external conditions, as well as the heart lesion, should be considered. For women, the injury to the heart arising from married life is greater than it is for men, and they should be warned of this when there are evidences of myocardial insufficiency.

Exercise in chronic myocardial insufficiency is a necessity, but it has its limitations, and the manner and amount of it must depend very largely, not only upon the individual physical condition, but upon the individual taste as well. The exercise that is forced against a patient's downright detestation of it probably will do more harm than good. However, the majority of people can exercise moderately with willingness and benefit. In case dyspnea appears, the exercise should be stopped, for the time, at all events. Though the very best exercise is walking, combining, as it does, all the benefits that exercise can confer without producing a deleterious excitement, other forms may be chosen when the condition seems to warrant it, such as dancing, billiards, croquet, and, perhaps, golf. Gymnastics, when of a kind adapted to the individual needs, are valuable and should be made a routine measure in this disease.

Regarding treatment, restoration of the equilibrium between the systemic and pulmonic circulation—which is the main object of the treatment—may be accomplished in several different ways. Much can be done by the removal of temporary causes, improvement of general nutrition, correction of defective processes in the digestive tract, and abstinence from all excesses. The simplest and best method would be, of course, to remove the cause itself; but this, except as to obesity of the heart, rarely is possible, although there is hope for the future in this respect, in view of the results of Brunton's experiments with animals. Symptomatic treatment, medicines, physical therapy, dietetic therapy, and special hygienic measures are employed for fulfilling all the indications.

[*To be continued.*]

Cervicitis and Cervical Erosions*

By George Starr White, M. D., Los Angeles, California

EROSIONS about the os uteri are seen so often by office-specialists that it is really unusual to find a normal os. I think I can safely say that the majority of erosions are not cured by the average physician. The reason is plain, namely, the erosions are secondary to cervicitis, as we seldom have one of these conditions without the other; and they are nearly always associated with an abnormal uterine position. Along with the proper replacing of the organ, localized treatment is advisable.

For these conditions, I know of no remedial agency that can compare with cataphoresis. Most of the concerns carrying electrical supplies for physicians can supply complete sets of electrodes for this work.

Treatment of the Cervicitis

For the cervicitis, I use a copper electrode, attached to the positive terminal, and insert it as far as the internal os. From 20 to 40 milliamperes of current can be used for from five to seven minutes. I do not rotate or move the electrode while it is *in situ*, as the current will cause the mucous membrane to adhere to the copper. I turn off the current and withdraw the electrode. Along with it, will come an accumulation of mucus as well as more or less mucous membrance. I then pack this denuded cervix with a cotton tampon saturated with pure carbenzol. (This tampon is described and illustrated later.) Sometimes one, two or three treatments will cure this annoying condition.

Treatments should be at least five days apart. On the intervening days, I give more general treatments, such as radiations from the 2000- or 3000-candlepower lamp, over the abdomen, also spinal manipulations in the sacral region, and so on. I also instruct the patient to do deep abdominal breathing-exercises every night and morning. These breathing-exercises are of the greatest importance, if they are carried out in the following manner: While the patient is undressed

*From the sixth edition of a "Lecture Course to Physicians" by the author.

and lying flat in bed or on the floor, she should take a deep breath so as to fill the lungs as full as possible, then press down on the diaphragm, so as to lift the abdomen as far as she can. In order that these patients may see just how far their abdomens are elevated during these exercises, I instruct them to put one hand on the abdomen and see how high they can elevate it. The patients should inhale while counting four, hold the breath while counting eight and exhale while counting eight. The more slowly they can count and carry out the exercises in the rhythm given, the better. These exercises are repeated at least 20 times every night and morning. I also instruct them to do a squatting exercise, so as to strengthen the thigh and abdominal muscles.

Another exercise I have found to be very good for this condition is, to have the patient take the knee-chest position and insert a rubber tube into the vagina while in that position. This allows the air to enter the vagina, thus permitting a forward movement of the uterus. The tube is withdrawn and the patient remains in that position for about ten or fifteen minutes.

Another beneficial exercise is, to have the patient walk about ten minutes night and morning on all fours, either naked or in pajamas. Night gowns are not suitable.

Treatment of the Cervical Erosions

For erosions, one can use the cervical copper electrode on the positive pole. (There is an electrode made especially for this purpose.) From 10 to 30 milliamperes passed for from five to seven minutes is the proper treatment, and it should not be given more often than once in five days. As a rule, no treatment is necessary for erosions, as they will automatically disappear when the cervicitis is cured.

If there are old cicatrices about the cervix, the proper way to treat them is, to apply thiosinamin cataphorically. This can be done easily through a speculum, putting a little cotton ball at the end of an aluminum or block-tin electrode. The better plan is, to use the electrode that is especially designed for this purpose. The solution of thiosinamin that I use is made up as follows:

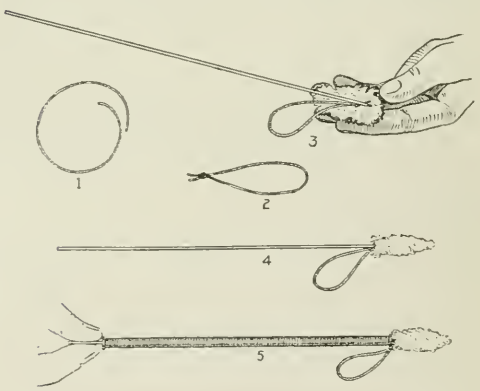
Thiosinamin	5 mils
Glycerin	32 mils
Water	96 mils
Sodium chloride	1 gram

Nascent iodine also is a very effectual remedy for an inflamed cervix or vagina. The way I make the nascent iodine is, to spray or swab over the surface to be treated a 15-percent watery solution of potassium iodide. Then over that wet surface I pass ozone, from an ozone-generator, under pressure. As soon as this ozone comes in contact with the potassium iodide, nascent iodine is formed. Its germicidal action is generally known.

Another method of treating the inflamed surface about the vagina and cervix is, to place a quarter of a compressed-yeast cake into the cul-de-sac and pass into the vagina a small rubber tube, with a syringe at the other end, holding about 30 mils of hydrogen peroxide. The vulva is kept closed securely by means of cotton or cotton gauze while the hydrogen peroxide is working on the yeast. The gas that is generated opens up all the folds in the vagina, and the curative effect of this procedure for all forms of vaginal inflammation is very marked.

Tampon for Cervicitis

The tampon above referred to is illustrated below. Figure No. 1 shows a piece of braided silk about 6 inches long. This is tied into a knot, as shown in No. 2. Then a piece of



cotton is put in the hand, the knot is placed in this cotton, and a wooden applicator wet in antiseptic solution is twisted on, as shown in No. 3 and No. 4. No. 5 shows a special tube through which the wooden applicator shown in No. 4 is passed. This tampon, when arranged as in No. 5, is placed into the cervix uteri, after first being wet with carbenzol or some other suitable oily antiseptic solution. By holding the tube and pulling out the applicator with the fingers, as shown in No. 5, the tampon will remain in the cervix for several hours before uterine contractions expel it.

If the patient lives at a distance from the office, it is well to have a thread attached to

this silk loop, so that it can be pulled out if much pain is caused in expelling it; but, generally it will remain within the cervix for several hours and then be expelled naturally.

This form of tampon is of great service when any medication is used in the vagina that should not reach the interior of the uterus. They can be made of any size, and it is well to make up a quantity of various sizes and keep them in a receptacle with gauze at the bottom and formaldehyde-solution sprinkled on the gauze. In that way, the tampons are always sterile and ready for use.

I have found this method of tamponing the cervix very useful for relieving many reflex conditions and also for dilating the cervix if it is too much contracted, which is sometimes the case in spasmodic dysmenorrhea.

Some cases of asthma can be entirely cured by tamponing the cervix in this manner every day for two or three weeks. It is well known among all practitioners that the reflexes from the cervix uteri have a very farreaching effect upon a woman's whole organism.

An Old Doctor's Life Story

An Autobiography

By Robert Gray, M. D., Pichucalco, Mexico

[*Continued from April issue, page* 390.]

Will Mortal Man Become Immortal?

THE mystery of immortality that most profoundly absorbs my meditations and solicitude is, the restoration of immortal life in a human shape on earth. The first stage of the process is actively in progress on earth in this age, the first time in the history of the world—the eradication of disease; something that never before was even dreamed of as a possible medical attainment.

In the process of nature, health would have to be the corner-stone and foundation of lengthened life. Evolution may be leading mankind back over the road down which the descent was made from the lofty state of immortality to the shackles of disease and premature death. Many scientists believe the attainment a part of human destiny; yet, naturally, none have reached the point to perceive the entire process, beyond the restoration of health and long life. Evolution can regenerate man despite his volition. Sterilization of criminals and constitutional transmitters of disease is beyond the will of those subjected to that process of social quarantine and constitutes a vitalizing feature of the physical mutation of mankind. Evolution is developing through the medium of the subconscious mind, to a degree never before conceived in the remotest dreams of betterment of our humankind. Evolution works through the channels of nature, which, though often slow and sluggish, yet are ever advancing.

When once disease is banished, the way will be open for ascension to higher-grade development. The power that deprived mankind of immortal life in a human shape can restore it again, and the process is of that tendency, health being the first principle of immortality in carnal life; and when health becomes general the other requisites of restoration may come into being almost spontaneously. Morals and virtue might spring from healthy body and mind almost without an effort, intelligence having become the dominating influence of life, voluntarily developed without the will, the impulse being caught from the implacable sway of evolution.

The question is not of our asking nor response nor carnal desire, but, what the higher powers design to make of us, without our participating will. Of course, the Creative Power that placed man on earth could purify and immortalize him in a moment, but not thus does it take place under the progressive process of nature, which requires ages to effect evolutions.

The reverse of what has debilitated and degraded mankind, and what can elevate him back to the lofty plane whence he has descended already is visible in the efforts of coping with disease and premature death.

Science is the handmaiden of immortality, the medium of enlightenment between evolution and mortality. The subconscious mind of those scientifically endowed receives the messages of elucidating instruction to teach mankind how to restore health and length of life, which have extended to and permeate every nook and corner of the world, being put to practical operation in many districts and published far and wide.

As natural mind becomes elevated in a degree to correspond with the subconscious

essence in a practical relation, the revelations in benevolent betterment of mankind will become more positive. The sublime favorites of science were thus superlatively endowed. They probably did not make any public pretentions to piety nor even to specific morality, nevertheless, they cultivated and nourished mental development to a degree that qualified them to become the mediums of transmission of legacies from the Divinity to the degenerate world, that was unworthy of such favors. Thus impelled to higher strata of life, the human family unconsciously grows more intelligent, through the medium of elevating agencies; gradually yielding to emancipating influences, as one falls to sleep when most anxious to be watchfully wakeful.

The advice of paternal precepts, the teachings of the schoolmaster, and the admonitions from the pulpit are lessons dependent upon the hearer's volition, if they are to be of service; the Fiat of Evolution, however, is masterful and forcibly makes mutations. We come under the charm and spell of an irresistible magnetizing power, that annihilates volition. We are electrified by the process of evolution, the same as this old world upon whose face we live. We can not even try to resist the subtle influence that whelms us. We sleep and dream and awake transformed or, at least, in an upward tendency, we know not why or wherefore. We instinctly turn from what attractively lured us yesterday. We have not repented nor supplicated emancipation from our slavery—yet, we feel its chain lighter and less galling. We feel, indeed, that we are about to become unshackled.

This subject has a magnetizing fascination for me; still, I must desist from its pursuit, as I am neither qualified nor worthy to develop the treatment it merits. At the moment, it is possible that no man is endowed to understand or to elucidate the mystic wonderment of immortality. Some of us may have vague, shadowy, fugitive conceptions of the startling mystery, too transiently dim to be focused down to rational realism. Imagination recoils, baffled in the contemplation of immortality involved in our vulgar clay tenements, and feels a sense of awed paralysis when the future of this fleeting span of mortal life looms up a phantom menace to the soul.

Nearly half the popular contributions and half the blood of man shed in deadly combat on earth were sacrificial offerings under the auspices of or in opposition to some religious propaganda designed to facilitate the redemption of the soul. Hence, one seems justified in making of the evasive theme a side feature to a medical disquisition, since many doctors are or pretend to be religious. And I believe that those who do their whole professional duty are in the highest religious grade on earth, unconsciously basking in the approving smile of Heaven.

Now I am back tonight in the dim shadows of my tropical home-life, amid the beauties of its enchanting realism.. I look around at the walls and fixtures of the office, so long the companions of my home solitude, and I realize the nearness of our eternal parting. The fruits and flowers without, so tenderly endeared to my appreciative mind, glimmer, as it were, in the pale clear moonshine. And all the night and all that it covers is beautifully and soothingly tranquil.

The Heir: A Difficult Problem

What absorbs me seriously, at the moment, are my little possessions, the creations of the genius of my old-age. I have no heir and there is no one to whom I care to will them. Good Doctor Maldenado is anxious to buy what I have, the possession to remain in abeyance all my life. I certainly have no relish to have the Mexican government as my heir—the eventual disposition of interstate property when there are no legal heirs. I have contemplated giving my name to some worthy girl, which, under the Mexican law, would make her my heir. However, I turn with repugnance from a proposition that would create an expectant waiting for my parting breath. I may live longer than I anticipate, my great grandfather having attained 115 years. I sometimes think of willing the place secretly to Doctor Maldenado, conditioning that it shall perpetually be a medical residence. But, then, inasmuch as not longer than three months ago he passed months under the shadow of the wings of the angel of death, it may well be considered problematic as to which of us two will be first to go hence, even though I am forty years his senior. And even the girl heir selected might not outlive me.

Thus, I hesitate and procrastinate and probably shall make no disposition till the hour to embark strikes. It is so different, with me, from those who have loved ones dependent upon them, who may discuss and make wills without scruples, as matter-of-fact deals; but I am delicate on this more than on any other feature of life. With me, there is no impulsion of duty. Should I die with no disposition made, I shall go up the mournful

hill no less tranquilly than I should were there a sale or a will.

Some three years ago, I took to my house a bright native boy, designing to train him in all that I know and finally to make him my heir—a mere hint of which never even entering his dreams. However, he soon demonstrated his inaptitude to learn, taking not the slightest interest in the lessons I aimed to inculcate, save in the kitchen, where he soon became an expert cook, and in the garden, where he quickly learned it all and in which he took an active interest. In the office, though, save in the mechanical processes of compounding and dispensing, he was listless and apathetic. He fled the peril of the rebels and meanwhile has gone to the bad, victim of the ruling dissipations.

A woman would be more constant in the duties of a housekeeper and of prime usefulness when the shadows begin to darkle in front of the portal of the bridge of death. I sometimes fancy that I shall take my leave violently, ere activity fails me; yet, I may linger helplessly for a long season. My grandfather mounted an unbroken 3-year-old blooded horse when he was 97 years old and rode it successfully twice; however, the third time, when passing a grove of timber, the bridle broke and the animal broke away, flinging him against a tree with sufficient violence to break all the ribs on one side, with the result that he died that night. Possibly I may be just as vigorous at the same age. I mount any new strange animal now, without scruple or fear, having lost my faithful mule which carried me many thousand leagues in these wilds. But I have been an expert, reckless horseman from early childhood, and even now go in the saddle over perilous passes where every native dismounts.[1]

The Blessing of Unbounded Health

It seems to me sheer ingratitude to whine about my hard and implacable destiny after having been so munificiently endowed with the plethoric treasure of never failing health, which no human relationship of family ties, social honor, rapturous love or gold have any power to purchase. If I have suffered mental anguish, this was largely modified by the perpetual absence of a twang of physical pain, not having experienced even a moment of laborious digestion or other disorder. Such treasure of health has no computable price and, surely, compensates for transient mental disquietudes. Those who have no mental ease and are in constant physical torture might well envy my lot.

Loneliness, such as dominates my life, may be preferable to maddening solitude in the surging crowd. A physician of the first rank in a great metropolis of millions of people and a far-famed college-head lately wrote me that he was more alone than I am, he having deeded his home and property to his wife, whom he had previously loaded with diamonds and endowed with government bonds, and she promptly turned him out of doors when once she was absolute mistress of the house, in legal possession, denying him his private papers and even his clothing. I think his first hour of realistic conscious mortification and rankling despair must have been equal to all that I have suffered since I turned my back upon the ruins of my paternal homestead and the graves of those I loved more than my own life, could such subsequent torture of mine be concentrated into one hour of racking agony.

It may be that I owe gratitude that whatever I may have suffered has not left my mind weak. This painful task remorselessly tore the cicatrices from some of the more distressing mental wounds till they bled anew; but now, that the task is done and need not be haunting my contemplation any more, as has been its wont in the past, and that I have no more to do with the backward track, I should lapse into the present and its daily routine, not solicitous about the eventualities of the morrow; and thus settle down to a fitting state of mental tranquillity that should leave me capacity to do my duty.

That hapless clinician and eminent teacher took lessons from my own history, intimately familiar to him, and fled the city and its follies and fashion and unsympathetic subterfuges, to make himself a refuge of fruits and flowers in an enchanted valley in a genial climate, far from the false and the cold conventionalities of hypocritical society.

The fate of that noble and generous man, who has devoted the very best blood of his polished bosom in meritorious effort to better the hard and miserable lot of suffering humanity, affords a pathetic antithesis darkly contrasted with the remotely obscure destiny that early became my unalterable heritage. Twenty years my junior, he had all the early advantages necessary for rapid development and to stimulate even inordinate ambition. He became a convert to the new medication

1. It is meet to tell the readers of these reminiscences, in this place, that Doctor Gray writes all his press-copy directly on the typewriter, without recopying, and it is punctiliously clean as to spelling, punctuation, and capitalizing, there being no erasures or changes in the diction, not to mention chapter numbers and titles and numbering of the sheets. It is a pleasure to pay this homage to the beautiful work of a nonagenarian who has spent his long years out of the reach of civilization, among the society of rude peons.—Ed.

while a young practitioner, and a popular medical writer. Thus he rose to the zenith of professional possibility, as clinician, medical teacher and author, and was rewarded with a fortune, rarely acquired in a medical lifetime. Then, at one fell blow, through the base ingratitude of treacherous misplaced affection, he was hurled down in wordly wealth and relations of family ties to the same level where I began. Unable to face the desolation of his life-shipwreckage, he found refuge in a rural hamlet, where he is likely to do more for the degenerate race than I have ever done in like resorts.

Average humanity envies the lot of the doctor—and here there body forth two extremes, namely: my own lowly, isolated lot perpetuated, his flung down from the lofty pinnacle of medical fame to a par with mine, or even below, since his refuge is yet to be created, while mine is complete, and, since the story of my life is nearing its end, while his is yet untold.

Such men as he and I have fearful responsibilities to requite. It may be we were driven into social exile to fit us and force us to serve outside the province of pleasant practice; I, to become qualified by slow and laborious preparation in this awful field, he to assume his charge in the first degree prepared, able to impart lessons of a higher grade than I have mastered. Both our cases seem stranger than incredible fiction and should be meditated by the profession as the outcroppings of a mysterious destiny that we were doomed to bear—in part, perhaps, as retribution for ancestral sinning, if not all for chastisement for our own waywardness. At all events, we have the dark insignia, possibly not as the revenging angel's mark of Cain, yet, such as it were well for young professional men to shun.

I wish I knew whether what many pretend to believe is true—that our retribution is all suffered in the flesh. It were too glorious if we could pass to the beyond limpid from every strain of carnal depravity. However, sane reason admonishes that such anticipation is absurd.

I turn me now from contemplation of the mystic beyond, which mocks conjecture, to sadly mournful circumjacent actualities, that loom up now in spectral menace but ghastly horrors, the visible and audible curse of blood and flame devastating and depopulating miserable and commiserable Mexico. We hear and read of peace, and see the tragedy proceed in open antagonistic combat or in the front of the firing squad. A number of days after receiving official knowledge that the rebels were in the city of Mexico, 13 of them galloped into this hamlet, yelling "Viva Carranza!" and collected money on the neighboring plantations, and took the jewelry of the female contingent, while the owners stood by with ropes round their necks.

More About the Mexican Turmoil in 1914

The rebels entered the city of San Juan Bautista, capital of Tabasco, where the federals were in the capitol square ready to surrender, save one lieutenant with 70 men who had not yet arrived on the ground; and the latter, learning the smallness of the rebel force, attacked furiously and eventually left the city with a heavy supply of captured arms and ammunition. The rest of the regular force finally completed their surrender. And then some of the commanders who thus had surrendered were promptly caught in the act of setting out on a steamer with arms, ready to start another revolt elsewhere; but, 5 of them were shot immediately, half a million of money being offered in vain by the family of one of them for his life.

All is mystery and uncertainty here, that is extremely distressing to the people. Most of the radical enemies of Carranza who have harmful influence are prisoners or in flight. Contrarevolutionists and bandits are shot in the act when caught. At the moment, the 20th of September (1914), a month since the entrance of Carranza into Mexico City, all this great southern belt of Mexico seems to be absolutely under the dominion of Carranza, and it is not likely that there will be any serious opposition, with the important leaders impotent, and the ex-federals gone to their homes, amply tired of war.

I think the more rational of the enemies of Carranza's propaganda are inclined to take their medicine and acquiesce with the best dissembled grace they can command. What else can they do? The situation is radically changed. With the peon element relieved of the labor bondage enthralling that great class of the population, the peon creditor cannot expect peon aid against Carranza. The small rancher, the best soldier material of Mexico, will not rally against Carranza.

In referring to Carranza I must be understood to mean the doctrine and not the man so positively as one might suppose; the democracy, however bastard it may be, being the ideal of the peon and the poor rancher, and they would fight to maintain it. They dream of a government equal to that of the

United States, and now have some shadow of a chance to realize their hopes—for the first time since their nominal independence from Spanish rule; for, the aristocratic rule ever has been the government of this nominal republic. But, now it seems that that element of the political fabric has been flung into a hopeless minority, if not practically eliminated from participation in any vital features of the government.

Clearly, the great landed estates are going to be broken up into small ranches, as homes for the peon class, and confiscation of property whose owners were actively in support of the Huerta rule may be anticipated; and most of such proprietors were forced to support Huerta wherever his power extended. Hence, it may be presumed that aristocracy soon will mean poverty, if not sheer penury, but certain to be sufficiently impotent to be rendered powerless to finance revolutions.

[*To be continued.*]

Magnesium Sulphate: Its History, Properties and Uses

By A. L. Nourse, M. D., Sawyerville, Alabama

Historical

IT WAS in the year 1675 when Doctor Crew obtained magnesium sulphate by the evaporation of the waters of the famous health-springs at Epsom, England. Later, it was found that the same substance could be obtained more cheaply from the brine of ordinary sea-water after crystallizing out the sodium chloride, subsequent purification being accomplished by separation from the other chemicals remaining. Other sources of this salt, used or available, are natural deposits in caves in various localities, the salt in these caverns being found in combination with silicates, chlorides, and other impurities. Dolomite and other magnesium-carrying rocks also may furnish it. Naturally, with such a liberal distribution, many springs become impregnated with magnesium compounds, these being usually accompanied by other minerals in solution.

In the late spring of the year 9911 B. C. (preadamite history) a certain Eurasian horde, wandering toward the then existent land passage to Britain, made quite an extended stop at a location precisely where descendants of a collateral branch of primitive man are now having unpleasantness over the spoils of modern inventive genius. The then frequent, although lessening, climatic changes caused such an abundance of animal food, by reason of several species of mammaliæ preferring to move rather than undergo slow evolutionary acclimatization, that a nomad tribe became, for a time, cavedwellers of fixed abode. Food supply was obtained with little effort. Result: our wandering primordials soon became the victims of disturbed metabolism, constipation accompanying. Sudden change, from active hustling for food supply and resting the alimentary tract by forced seasonal abstinence when temporary bounty is exhausted, to indolence and overfeeding will, even today, put man's metabolic balance awry. Hence, constipation, lethargy, and laziness overtook those archaic persons of whom we so accurately write.

Even at that comparatively early date, curative science had its exponents, and a certain gentleman of higher mental coefficient than his fellows took claim to having influenced the unknown powers to furnish the unprecedented bounty; also, in consideration of divers tidbits from the slain beasts and the best of the skin and fur offerings, he assayed to cure the ills to which their primitive luxury tended. Even after our succeeding centuries of enlightenment, and in view of certain healing-stunts pulled off today, we refrain from the slightest adverse comment upon the system of practice of our long-passed predecessor in the art curative. Suffice it to say that this smart gentleman of old called upon the evil spirits to depart and upon the spirits benevolently inclined to open both the bowels of compassion and those excrementary ones of the illhumored clansman.

However, as in all systems of practice, percentage of cure fell below the hundred mark. This, even in self-limited disease—although this early clinician denied, utterly, self-limitation of disease, but took to himself the credit for all the cures. Also, it was a custom of the then—a custom now most happily nearly extinct—to send the manifestly incurable elsewhere to die. This, because of the nondevelopment of a profitable postmortem industry: man not yet having

evolved high enough to push the departed's relatives for up-to-the-minute obsequies.

Matters being in the state thus briefly outlined, our medical gentleman aforesaid sent one of his presumable incurables out into the little-known land to prepare for his journey to that completely unknown bourne whence there is no return—to wit the doctor. But, even since the year 9911 B. C., persons have recovered after true science has said them nay. Staggering toward the setting sun, with hands pressed upon overdistended abdomen, the primordial one sank in exhaustion beside a sparkling spring. The bubbling water showed clear in the dying light, the thirsty wanderer knelt down to it and took a gulp—ye gods! it tasted like—like a dose of salts. It was bitter, bitter as anything. But, thirsty to torture's point and under scientific sentence of death, he cared naught. He was desperate. He drank copiously. Then he lay down beside the water's edge to—die. Now, the prowling sabertooth and the other fleshhunting beasts held this pool in disrepute and shunned it, and thus did not find him. Before Phoebus' car mounted above the enclosing hills, our sleeper awakened, abruptly, to a realization of the unforeseen effects of active catharsis. And thus it was that, not only was a cure of his general metabolic discord wrought, but his travel-bruised feet, having lain in the spring's overflow, also were greatly benefited, the swelling being gone.

Straightway this joyful prediluvian betook himself back to the tribal caves. The wonder was related to the priestcraft-hoodoo-medicine specialist. In an appropriately dignified manner, that worthy did explain the matter. It seems that the waters had been charged with healing power by the great one's sacred invocation and that a special good spirit had guided the journey both ways, giving both healing and protection from the sabertooth; the latter a bit indolent himself from an easy living of those bountiful days.

The recorder of contemporaneous facts may be influenced, by a cringing servility to the powers that be, into fact distortion, but, in the chronicling of long-past events, we may deal without fear or favor—hence, this accurately compiled bit of history, presented without apology to other anthropologists. It is but necessary to add that the great healer immediately had the spring declared tribal property and himself as custodian of the healing outpour from the magnesium-charged rocks. The penalty for unauthorized use was wrath of the gods, and no man dared taste the waters without authority, lest he fall dead, instead of receiving the restorative gift of catharsis.

Epsom Salt in the Present Day

We now know that magnesium sulphate is a true metal sulphate and that the molecule ($Mg\ SO_4$) carries seven molecules of water of crystallization with it. In many instances, the modern pharmaceutical chemist drives off this water of crystallization by dry heat, thus converting the characteristic crystals to a powder and rendering the salt more effective, through its greater tendency to reabsorb water, and more convenient of handling, with modern pharmaceutical elegance. It is thus that the effervescent preparations and combinations are made, permitting the physician to administer the classic "salts," even to children, in an agreeable draught, thus relieving the patient of the disagreeable ordeal of "taking a dose of salts" and substituting a most pleasing cooling draught, effervescing, if so desired.

Physiological Action

Internally administered, magnesium sulphate is to be considered as a quickly-acting hydragogue cathartic, with secondary antiacid and anti-fermentative action. It is probable that in ordinary internal administration, *except when large doses fail to pass through the bowel,* this is the only action received; lowering of excess blood pressure naturally following hydragogue depletion. Thus do we have an ideal agent of aid in the modern "clean-up and keep-clean" therapeutic program. The phosphate or other magnesium salt will be the one of selection when the supply of this metal to the nerves is to be added to. The method of accomplishment both of catharsis and local depletion of engorged tissue is largely, perhaps completely, by endosmosis or exosmosis, as the case may be. In the gastrointestinal tract, the solution of this salt acts under the law of osmosis. The intestinal wall acting as the membrane, passage of water occurs inward, tending to equalize the osmotic pressure; and this results in pressure excitement to the reflex of peristalsis, with the consequent watery stool. The same action of the salt explains its value in reduction of anasarca or other swelling of external manifestation.

Local Applications

In recent swelling from sprains or other injury, application of hot solution of magnesium sulphate, under oilsilk or even protected

only with ordinary towels, is of the greatest value. Changes should be made often enough to keep the solution hot and the cloths saturated. Where possible, as in the foot and ankle or hand and wrist, directions may be given to soak the parts for from an hour to very much longer. Additions of hot water may be made to the solution as it cools or the patient's tolerance of the heat increases. There is no harm to abraded surfaces if the solution can be stood in contact with them. Solution may be employed up to saturation if desired, but one much weaker usually suffices. Often with no other treatment than this, especially if promptly instituted, it prevents serious trouble with a badly sprained ankle. It is the writer's custom to eliminate, by examination, luxation or fracture, then order the hot epsom-salt solution. With older injuries, continuous soaking in this manner often will so reduce swelling that diagnosis is easier.

Good results are obtained even in erysipelas from these applications. The saturated solution is used, preferably with the addition of glycerin. It should be continuously maintained. Here, we have local infiltration, and, with this removed, the leukocytes seem to be able to handle the infection; although, of course, other indicated internal treatment is not neglected.

In the swollen ankles of nephritic patients, great benefit at times is had from a nightly soaking. Wherever edema is the result of watery fluid, the epsom salt deserves a trial.

In Gynecology

In one class of cases, we have here a remedy of untold value—one often overlooked: the engorged womb. Here is the coming candidate for Alexander's or other operation for shortening the ligaments, if successful non-surgical treatment is not instituted. Time was when that swollen womb received a tampon saturated with glycerin and magnesium-sulphate solution, with appropriate internal treatment, and, where indicated, the knee-chest position. Now we no longer squeeze out the cotton from the rather nasty solution. This part of it is attended to by the use of suppositories containing dehydrated magnesium sulphate. The writer considers the use of this salt in womb conditions requiring relief of engorgement absolutely indispensable. In no other part are we more likely to find need of local depletion. *Magnesium sulphate will surely do the depleting.* An alkaline antiseptic douche well precedes the introduction of the suppositories at night and should also follow the use of one the next morning.

Hypodermic Use

The hypodermic use of this salt for cathartic effect was quite general several years ago, but seems to have dropped out for a time to meet with recent revival. As to its safety, as well as its efficiency, we lack evidence for unqualified endorsement.

The reports about the injection of magnesium sulphate for tetanus are favorable and it should receive weighty consideration in these cases. This writer has been fortunate in seeing no recent cases of this dread infection; however, when one should be encountered, lobeline and magnesium sulphate will be the first thought. The hypodermic administration of the latter salt is a matter for far more careful judgment than that by mouth; used in this way, the drug is a potent one, and both narcosis and extreme depression of the heat-center are among the things to be considered.

Rectal Employment

Epsom salt, with or without glycerin, is of importance given in enemas. However, it is from the *retained* high enema that the benefit is derived. If one is sure that an immediate bowel evacuation will follow, the addition of the salt might as well be omitted. Nevertheless, even the fair possibility of retention many times justifies the addition when the soothing and depleting effect is desired. At times, a washing out of the bowels may be followed in a little while by the introduction of a small amount of the saline solution, to render the cleaning-out process more thorough.

Where the desired effect of a saline is prompt catharsis to the degree needed, which can be secured by dose regulation, magnesium sulphate meets all requirements. If other effect than this is desired, another one of the group will be selected or added. Sodium phosphate, or the sulphate, will, likely, meet requirements if cholagog action is to be secured. For the routine follow-up of calomel, alone or in combination, as part of the cleanup program, nothing exceeds in value the epsom salt.

Choice of a number of aromatized, sweetened or effervescent preparations is offered, and there is little need of taking the villainously-tasting salt itself. The physician doing his own dispensing may even make a stock saturate solution, sweeten and flavor to taste, by addition of saccharin-solution and aromat-

ics, and dispense with the instruction to take a tablespoonful in a glass of water on getting up. Most patients will take a properly dispensed saline either in powder or solution, but it is hopeless to expect them to "take a small dose of salts each morning." Put the agent up with as much pharmaceutical nicety as possible, and charge for it the same as for any other medicament. This also holds true, frequently, for the use of the solution for external application. The writer has known of persons who would laugh to scorn the simple "salts"—also the fool doctor who would prescribe it—but who would reverently carry home a quart bottle of colored and flavored odorous solution, pay a reasonable price for it, use as directed, and—the desideratum—get the results desired.

With the coming of the mosquito season, the writer will give personal trial of a spongeoff with a saturated solution of this salt when he is exposed to these and other offending insects. The protection is said to be very satisfactory.

The laxative and soothing effect of magnesium sulphate renders it a desirable addition to many forms of "tonic" treatment, and the administration of the small dose some time before meals exerts a beneficial laxative effect, as well as aiding in giving the gastrointestinal tract a gentle bath before assuming its diurnal duties of digestion and absorption. Ferric chloride, quinine sulphate with aromatic sulphuric acid (to make solution), and a menstruum of saturated solution of magnesium sulphate will be found a serviceable "chill tonic". This to be taken, of course, with plenty of water.

The very fact of its common usage has caused the virtues of this valuable agent to be a bit overlooked, but the success and pharmaceutical elegance of the physician's practice is enhanced by an almost routine liberal use of a pleasant effervescent preparation of magnesium sulphate. Taking medicine may be popularized even with the children by giving this with the addition of a bit of lemon-juice and sugar. There are almost no contraindications, except that it .be avoided in extreme debility, where any measure of depletion is contraindicated. Certainly no man would precede the intravenous introduction of physiologic salt solution by saline cathartics or even laxatives.

Nonoperative Gynecology

Menorrhagia and Metrorrhagia

By William Rittenhouse, M. D., Chicago, Illinois
Professor of Obstetrics, Loyola University, Chicago

[*Continued from June issue, page 420.*]

WHEN the menstrual flow is excessive, it is known as menorrhagia, while an excessive flow of blood from the uterus at any other time is called metrorrhagia. Clinically, the two can not always be distinguished from each other, nor is it, as a rule, necessary to do so, since the principles of treatment are virtually the same for both.

Etiology and Diagnosis

The cause of bleeding from the uterus usually is, a relaxed condition of the uterine muscle and mucosa, the latter being covered with granulations that bleed upon the slightest provocation. This condition of relaxation may result from various causes, one of the most common being subinvolution following either parturition or abortion. It also may be owing to a fibroid, a polypus, to misplacement or cancer. Sometimes anemia seems to be the only cause, so far as can be discovered. Certain women appear to have a natural and unaccountable tendency to menstruate too profusely or too frequently.

The diagnosis is self-evident so far as the condition itself is concerned, but, is important mainly as to its cause, because a knowledge of that determines the treatment. It is evident that, when the trouble is owing to polypus, it will require different treatment than when caused by abortion. When the patient is approaching middle life, the possibility of cancer must not be overlooked. In some cases, treatment is helpful in establishing the diagnosis. For instance, if the woman has recently gone through parturition or an abortion, one may reasonably suspect subinvolution, but, if appropriate treatment on that basis fails to give relief, then fibroid tumor or polypus should be searched for.

The Treatment of Metrorrhagia and Menorrhagia

Of all the drugs used in uterine hemorrhage, ergot justly stands at the head of the list.

Its power of contracting unstriped muscular fiber renders it of use in most forms of this trouble. In some instances, its value is only temporary; still, it very often is curative. Where a quick result is imperative, the ergot may be given in a fluid form, as is done in obstetrics; but, in gynecology, it is better, as a rule, to administer it in the form of ergotin. It keeps better in this form and is not so likely to disagree with the stomach. The latter fact is an important feature in gynecological work, as the drug usually must be continued for some time.

Indications for Ergot

In subinvolution, the uterine mucosa is more or less covered with granulations, which, if detached, have the appearance of bits of jelly or boiled tapioca. As long as these granulations line the uterus, there is pretty certain to be excessive flow of blood either at the menstrual periods or between them. In this condition, the use of ergotin daily for two or three weeks often will effect a cure. The tonic contraction of the uterine muscle brings pressure to bear upon the granulations, their blood supply is diminished, they are cast off, and the mucosa returns to its normal condition. If parturition or abortion has occurred recently, this treatment ordinarily is successful; however, when these granulations have existed for a long time, they first should be removed with a dull curette and then a course of ergotin should be maintained for, say, three weeks, so as to prevent their return.

As a rule, the curettage should be done under anesthesia, although I have done it without. In some cases, the uterus is singularly insensitive. I have seen cases in which the condition became normal after a single application of tincture of iodine to the uterine mucous membrane.

The sharp curette is a dangerous instrument to use in these cases, and quite unnecessary.

If the hemorrhage is due to a fibroid or a polypus, ergotin may give a little temporary benefit, but, obviously, can scarcely be expected to produce a cure. Instances are on record, however, in which an intrauterine growth has been strangulated and expelled by the continuous contractions induced by ergot.

In the hemorrhage of cancer, it is obvious, of course, that little can be accomplished with ergot.

When the patient is markedly anemic, iron, arsenic, quinine or strychnine should be added to the treatment, as found advisable. The more or less prevalent belief that iron is contraindicated in uterine hemorrhage is not well founded.

In giving ergotin in gynecological work, the object is, to maintain continuous tonic contractions of the uterine muscle for a considerable period of time, say, two or three weeks. This result is obtained best by giving a fairly large dose once a day. I usually order 3 grains of ergotin after the principal meal of the day, and thus get better results than when I give 1 grain three times a day, while the stomach is not so liable to rebel.

More About Subinvolution

Subinvolution of the uterus following abortion or parturition is a condition of sufficient importance to warrant a more detailed consideration, and, first of all, a few words may be devoted to the nature of this condition.

The enlargement of the uterus during pregnancy is not a mere stretching of its walls; but, an enormous amount of new tissue is added to those walls, to give the thickness and strength requisite to the final expulsion of the fetus. After the uterus has emptied itself at delivery and become firmly contracted, it can be felt by palpation, with the hand over the abdomen, as a round object of about the size of an infant's head, or, several times larger than when nonpregnant. A process of diminution sets in at once, which has reduced the organ to about its normal size by the end of eight weeks. This reduction is known as involution and consists essentially in a fatty degeneration of the surplus muscular fibers and their absorption by the lymphatics, with which the organ is most abundantly supplied. Various causes may interfere with this process of involution, and, then, the uterus remains larger and heavier than normal, in other words, in a state of subinvolution. Among the causes that interfere with involution, we may mention infection, laceration of the cervix or perineum or vagina, getting up too early after confinement, or too much exertion of any kind in the two months following delivery. Abortion is especially liable to be followed by subinvolution.

The effect upon the patient's health varies from nothing to producing semiinvalidism. Besides the menorrhagia and metrorrhagia mentioned above, there may be catarrh of the cervix, misplacement, backache, and a variety of nervous disturbances. Besides, the uterus

is larger and heavier than normally and frequently more or less prolapsed.

The Treatment of Subinvolution

To get the best results in aiming to reduce a subinvoluted uterus, it is necessary to stimulate to increased activity the circulation and lymphatics of the organ, and this can be accomplished by the prolonged use of ergotin as already described, by the use of hot vaginal irrigation, and by applying glycerin tampons. Sometimes supporting the uterus, either by means of a pessary or a wool tampon, is very necessary. The manner of irrigating and using glycerin tampons is important, failure to get results mostly being due to faulty method.

The irrigation must be slow and prolonged the injected fluid being quite hot. It need not be repeated oftener than every other day, as frequent irrigation is exhausting. It is best taken lying down, but, as this requires assistance and special apparatus, it is impracticable for many patients. Good results can be obtained by using a fountain-syringe in the sitting-position, provided the reservoir be refilled several times.

Soon after the irrigation, the vagina should be well packed with tampons of cotton soaked in glycerin. To use one small wisp of cotton with a teaspoonful of glycerin on it is utterly futile. There must be enough glycerin that its hygroscopic action will extract water enough from the tissues to make the wearing of a napkin necessary. The tampons may be left in place for from twenty-four to thirty-six hours. Where there is evidence of much infection (such as purulent leucorrhea or excessive cervical catarrh), it is a good plan to begin the treatment with applications of powdered boric acid in plenty, secured by a suitable wool tampon. This can be left in place for three or four days without becoming offensive. The boric acid slowly dissolves and disappears, leaving the parts cleaner and healthier.

Placenta Succenturiata

Placenta succenturiata is a name given to a secondary, or subsidiary, placenta. It is described in the books as a small lobe or cotyledon attached at a little distance from the main placenta—a formation that probably represents a partial reversion to an ancestral type, since in some of the quadrupeds the placenta normally consists of a number of separate cotyledons, instead of a single mass.

This matter would not concern the gynecologist, were it not for the fact that sometimes a cotyledon remains behind when the main placenta is delivered at the time of parturition, and, continuing its attachment to the uterine wall, maintains its vitality until, weeks or months afterward, the uterus expels it with symptoms like those of abortion.

Another theory as to the origin of these placentæ succenturiatæ is, that a small fragment of the placenta proper remains attached to the uterine wall at the time of delivery and happening to have a fair blood supply starts upon a career of growth of its own. Whether this latter theory is correct or not, is a question that I see no way of deciding.

I have seen three of these subsidiary, or secondary, placentas. One came away four weeks after labor, the patient being a young and healthy primipara. In another case, the expulsion took place about six months after confinement (the third) in a woman of thirty-five. In the third case, the woman was nearly fifty, had not menstruated for two years, and her last pregnancy, which had terminated in abortion, had been five years before. In the first case, the placenta was about an inch and a half in diameter; in the second, about three inches; and, in the third, about five inches, or as large as a small full-term placenta. In all of them, the tissue was unmistakably placental and showed no signs of hydatiform mole. The facts in the third case are, to say the least, remarkable.

The symptoms, as already stated, resemble those of abortion. There are uterine contractions, more or less painful and accompanied by hemorrhage, until, finally, the mass is expelled. Assistance with the finger or placental forceps may be given, but, as it is very desirable to get the mass away unbroken, it is best, as a rule, to interfere but little. If the growth is torn, part of it may be left behind, so, when in doubt on this point, the dull curette had better be used, to insure thorough evacuation.

If the hemorrhage is excessive, it is best controlled by packing the vagina with gauze, just as is done in abortion. On removing the packing after twelve hours or longer, the contents of the uterus usually are found to have descended into the vagina.

[*To be continued.*]

What Others are Doing

THE INFLUENCE OF PITUITARY EXTRACT UPON DIURESIS

There has been extant conflicting evidence as to the influence of preparations of the posterior pituitary lobe upon diuresis, some observers asserting that it augments and others that it diminishes the secretion of urine, and it has been thought by some that this organ possibly contains two antagonistic principles. However, experiments conducted by von Konschegg and Schuster (*Deut. Med. Woch.*) conclusively demonstrate, by animal-experiments, that either action may be obtained from the same preparation and of any make; the fact being that small doses of the substance at first increases diuresis, while its ultimate, and quite early, effect is, to check the secretion of urine; the latter action also being the primary one when the dose is large, and especially when introduced intravenously.

The explanation of this twofold action the authors find in the assumption that the normal action of the pituitary hormone upon the uropoietic cell is depressing, while the primary, stimulating, action represents the difference between the hormone of the cell and the hormone carried by the blood current.

PITUITARY EXTRACT IN DIABETES INSIPIDUS

In the article referred to in the foregoing paragraph, von Konschegg and Schuster (*loc. cit.*) describe their experience with posterior pituitary extract in the treatment of diabetes insipidus, while also reporting that in the case of renally sound persons the injection of 1 or 2 mils (Cc.) of the preparation causes a decrease in the secretion of the water as well as the solid elements; and that this effect continued for as long as sixteen hours.

As to one case of idiopathic diabetes insipidus, the intravenous injection of from 1 to 2 mils of extract caused a reduction of the urine, during twenty-four hours, to one-half of the usual. However, since the solids are not diminished, the urine of the patients under this treatment is of nearly normal specific gravity, while their thirst is materially less. The authors recommend to let a course of this treatment, on normal diet, be preceded by periods of salt-free diet (Erich Meyer); and thus to alternate.

In the same journal (*loc. cit.*), G. Graul reports in the same vein on one experience with true diabetes insipidus. He made the injections intramuscularly, 1 mil every other day. Under a purely dietetic regimen, the daily output of urine sank, from 9500 mils, to 5000 mils; but this dropped down to 2000 mils after the hypophysin-therapy was added, and this, although the patient now drank fluid as his desire prompted. He received 16 injections, all told. Three weeks after quitting the injections, the urine voided had not increased in amount; however, the urine never attained to its full normal concentration.

DIGITALIS IN DELIRIUM TREMENS

According to Scharnke (*Muench. Med. Woch.*), full dosage with digitalis gives excellent results in severe cases of delirium tremens, and the action is asserted to be surprisingly rapid. Even though only transitorily, the patients already after twelve hours become clearer in their heads, take food, and permit themselves to be kept in bed for hours. The author gives 20 drops (or more) of digalen three times a day. However, the patient also receives 1 or 2 Grams of veronal.

COMBINATION-NARCOSIS BY THE INTRAVENOUS ROUTE

A series of experiments was performed by Ernst Luethi (*Zeitschr. f. Exp. Path.*, 1916, p. 171), to determine the relative value of different combinations of narcotics, for producing narcosis, when intravenously administered; rabbits being the animals employed. For comparison, a rabbit was fully narcotized by means of pure ether injected into the auricular vein.

Then the following combinations, respectively, were tried: ether with morphine, with scopolamine, with tincture of cannabis, with

morphine and tincture of cannabis, with morphine and scopolamine, with scopolamine and tincture of cannabis, and with morphine, scopolamine and tincture of cannabis.

As compared with pure ether narcosis (produced by a given amount) everyone of the additions named very markedly diminished the effect otherwise obtained from the ether alone, to the least extent by scopolamine, and most so by morphine alone and by the cannabis alone. A further observation was, that some of the concomitant harmful effects of the ether narcosis were augmented. Particularly, morphine caused an "abnormal" depression of the respiration.

ON THE CAUSES OF DYSENTERY

Wherever large numbers of people congregate under conditions of housing that must be designated as extemporized or, at least that are not permanent, it has been the constant experience that digestive disturbances were the most important and perhaps the most difficult condition to be met. Military medical officers have come to the conclusion that troops in service are more liable to intestinal troubles than other people, for the reason that the rations are the same day after day, and that the monotony of eating the same daily ration acts psychologically in bringing about anorexia and indigestion, thereby lowering the soldier's resistance.

Owing to the exigencies of military expediency, moreover, it often is not possible to pay suitable attention to the requirements of sanitation during certain movements of the troops. In every campaign, the military and tactic considerations of necessity occupy first place, and several days may pass before sanitary arrangements can be made for soldiers; during that time the area occupied by the troops will become contaminated with fecal matter, while other material, including, perhaps, dead bodies of men and animals, may aid in forming breeding places for flies.

This has been the experience of Captain T. J. Carey Evans, of the Indian Medical Service (*Brit. Med. Jour.*, March 31), who emphasizes the fact that in the bacillary type of dysentery the main source of infection is the common house-fly. In his experience, the prevailing type of dysentery during the first few weeks or months of a campaign was the bacillary type; and when the troops were beginning to become fatigued or exhausted, when perchance the weather became colder and wetter, where rains damaged the quality of the rations, the amebic type of dysentery was found to make its appearance.

The virus of this latter type of the disease undoubtedly may be latent, since the entameba very probably may exist inactive in the mouth and in the intestines of apparently healthy persons. Captain Evans believes this possible, since it has been shown that the entameba histolytica frequently exists between the gums and teeth in cases of pyorrhœa alveolaris. The diphtheria-bacillus can exist in the fauces of the host without causing him any inconvenience, while the presence of the cholera-vibrio in the stools of an apparently healthy individual is nothing new. Nevertheless, in the amebic form of dysentery, also, the common house-fly has been found to be an important agent of conveyance, although drinking-water likewise is a frequent source of infection. Under favorable circumstances, such an infection may lie dormant, evidencing its presence only when the host has become debilitated and his resistance lowered in any manner.

Captain Evans points out, further, that, although simple acute bacillary dysentery and simple acute amebic dysentery are definite clinical entities, there occurs also what might be called an acute mixed type of dysentery, showing at first clinical symptoms pertaining to the acute bacillary type, which then merge into those of the acute or subacute type. Furthermore, it is to be kept in mind that bacillary dysentery itself may occur in several varieties, which should be differentiated biologically, for the purpose of etiological treatment.

THE SYMPTOMATOLOGY AND TREATMENT OF DYSENTERY

In some cases of dysentery, the disease begins as a simple diarrhea, while in others the onset is sudden, with frequent stools containing quantities of mucus and blood; the voiding of which is associated with colicky abdominal pains. Tenderness over the descending and sigmoid colon is frequent. In severe cases, the fecal element in the stools soon disappears and the patient passes large quantities of mucus tinged with varying proportions of blood. After a few days, there may be no trace of blood visible to the naked eye, while frequent movements may pass containing large quantities of purulent mucus. Tenesmus, as a rule, is not very marked in the bacillary type, and may be absent altogether; but, it is the symptom that is almost characteristic of amebic dysentery. This

tenesmus may be so intense that the patient dare not leave the commode, while the pain and straining may bring on a certain degree of collapse; yet, only small quantities of blood-stained mucus may be discharged.

Captain T. J. Carey Evans (*Brit. Med. Jour.*, March 31), to whose article we have already referred, insists upon the extreme importance that among troops every case of diarrhea, however mild, should be treated promptly; the patients being admitted to the hospital whenever possible, and the stools rendered innocuous. In dysentery, absolute rest in bed in the recumbent position is essential, since walking about has been found greatly to delay recovery. The diet should be very sparing and at first should consist of nothing but barley-water or rice-water. Later, milk may be given, but, if it is passed undigested, whey should take its place or a few grains of sodium citrate be added to each pint of milk, the result being watched in each stool. The less of soups and broths given, the better. Kumiss or buttermilk is an excellent diet and can easily be made with the aid of lactic-acid bacilli, preferably those of the Bulgarian variety. As the patient progresses, rice thoroughly boiled in water is the best solid with which to begin feeding, since it is easily digested and does not contain too much starchy matter, as is the case with sago, arrowroot, and similar products. During convalescence, soldiers frequently object to the restricted diet permitted them, so, care must be taken to prevent sympathetic friends smuggling to patients dietetic contraband that is likely to bring about a relapse. During this time, the careful examination of each stool affords a means, not merely of controlling the progress, but also of detecting the ingestion of forbidden food as well as ascertaining the time when the patient may be discharged.

To prevent the spread of the disease from infected stools, they must rigidly be protected against flies and be immediately destroyed, whenever feasible, by incineration, or, when this is impossible, one of the approved disinfectants should be added before disposing of them.

According to Doctor Evans, a suitable routine treatment of acute dysentery consists in administering 2 drams of magnesium sulphate when the patient is admitted, and repeating this dose every two hours until the stools become feculent or until 2 ounces of the saline have been taken. As a routine measure, associated with rest and diet, this has proved to be satisfactory in bacillary dysentery. If no improvement follows, the patient is given bismuth salicylate and salol, 10 grains of each three times daily for three or four days, and at the end of this course again is subjected to the above magnesium-sulphate treatment. This saline acts mechanically by ridding the patient of the bacterial and other débris in the intestinal tract, while, possibly by virtue of its lymphagog action, it may draw into the gut any antitoxins that may have formed in the patient's blood.

With this treatment in the field-lazareth, it was found possible to return to duty, within fourteen days, 90 percent of the dysentery-victims among the Indian troops at the "Anzac" camp.

If pain is intense, hot fomentations applied to the lower part of the abdomen frequently will relieve it: otherwise, 10 minims of camphorodyne* or 10 grains of Dover's powder will be found to act satisfactorily.

Doctor Evans deprecates the promiscuous injecting of emetine in every case of dysentery as harmful and as likely to cast discredit upon a meritorious drug; emphasizing that the emetine treatment should be reserved for the amebic forms of dysentery. Even in mixed cases of dysentery, this remedy was found to have little effect until after the patient had gone through a course of the saline-laxative treatment.

We are convinced that the bacillary type of dysentery will do well under the cleaning-out treatment indicated by Captain Evans, supplemented, however, by large doses of mixed sulphocarbolates in which the zinc- or, perhaps even better, the copper-salt is represented in relatively large amounts. For the intoxication, we are strongly inclined to put our faith in calcium sulphide pushed to complete saturation of the patient and maintaining the effect until convalescence is well established. The calcium sulphide undoubtedly is of advantage, being applicable to both types of dysentery, although, of course, in the amebic condition, the necessity of emetine treatment has been sufficiently demonstrated.

INTRAVENOUS VACCINE-TREATMENT OF TYPHOID FEVER

The direct introduction of vaccines into the circulation has as yet been little practiced, Hans Reibmayr, of Wien, writes in the *Muenchener Medizinische Wochenschrift* (1915, May 4, p. 610), although various forms of vaccines (streptococcic, typhoid, cholera, etc.) are being administered subcutaneously and intramuscularly for curative purposes, while

*Cf. Extra Pharm. Br.

one vaccine has, indeed, been used intravenously, but then only as a diagnostic means. On the other hand, bacterination by way of subcutaneous and intramuscular injections has proved so successful in several infectious diseases—even in cholera, lately—that this method already has been widely introduced.

In the endeavor, however, to attain still better results, experimenters kept in view more the variation of the manner of production of the vaccines than an alteration of the mode of its administration; thus evolving quite a variety of vaccination-products. But, because of the comparatively slow and not rarely failing action of this manner of employing the preparations in their treatment of typhoid-fever patients, the staff of the military hospital for infectious diseases at Rosenberg, Silesia, finally decided to venture their direct introduction into the blood current—a method proving so satisfactory for numerous other medicaments. Doctor Reibmayr's report relates to 70 patients treated during the period of three months; and the results of the intravenous injection of specific vaccines in typhoid fever have been such that, he declares, they point out a road which, if followed, promises to lead to a method capable of cutting short typhoid fever.

The nature of the biologic reaction, Reibmayr explains, is not as yet clear; but, the aim now must be to produce an appropriate vaccine, determine the best dosage, and learn how best to combine the treatment with medicinal therapy. Of course, a much larger experience is needed, in view of the protean character of this disease.

The vaccine employed was one prepared in the hospital-laboratory for antityphoid vaccination, and consisted of a mixture of one old laboratory strain and of freshly obtained cultures from two different kinds of blood. The suspended bacteria were killed by subjection to a temperature of 53° C. for one hour, and then 1-2 percent of carbolic acid was added. For a number of the patients, a vaccine was employed that came from the Serotherapeutic Institute of Vienna. These vaccines contained 500 million germs in 1 mil (Cc). The doses—injected into an arm-vein—ranged between 0.5 and 1.2 mils. as lower and upper limits. These intravenous injections of the typhoid-vaccine never produced a painful area at the side of puncture.

In from thirty to forty-five minutes, a pronounced reaction, in the form of chills, sets in, these becoming intensely severe (as in malaria), unless modified by a dose of quinine (15 grains) taken one hour before injecting the vaccine (which does not seem to interfere with the treatment). These chills last for about one-half to three-quarters of an hour, when a rise of the patient's temperature takes place, of, ordinarily, 2 degrees Centigrade (3.5°F.) above the regular fever-point (to 41° or 42° C., from 39° or 40° C.). This elevation continues for from five to twenty-five hours, when the temperature rapidly drops down to 37°, (98.6° to 95°F.) even 35° C., and, although rarely, lower yet. Simultaneously with this change (disappearance of pallor and sense of chilliness, reduction of arterial pressure, increasing pulse rate), the patient begins to feel tired and weak; however, these phenomena never grow alarming, so as to call for injections of camphor or for other analeptic medication. This same rise of temperature occurred in typhoid patients having no fever, as also in persons not sick with typhoid fever.

A certain proportion of the patients exhibited a sense of perfect wellbeing and also a strong appetite one or two days after they received the injection, and remained absolutely free from fever; others were markedly improved and their fever-curve remained materially lower. Nevertheless, a few remained refractory. One peculiarity was, that during the period of chills many of the patients felt a strong urge to defecate, and the dejecta were liquid.

In a number of cases in which no reaction occurred or the fever-temperature reappeared, the injections were repeated; but, as a rule, the result was the same, and the first injection was determinative. The reason for this could not be established by variations in the treatment; however, certain complicating conditions (presence of the pneumococcus for example) may be a factor.

Invariably the diagnosis was verified by means of the agglutination-test and a bile-blood culture.

As already observed, with the decline of the fever, the patients improved rapidly, they gained appetite, took on flesh, and their minds became clear. But even when the temperature again rose the hebephrenia, deliria, and other cerebral symptoms were much less pronounced.

These typhoid-patients were from the very beginning allowed a more liberal diet than is customary, namely, thin mushes and even washed meat. Baths being out of question, cold packs and spongings were substituted for them. They did not modify the course of the vaccine-reaction.

Essentially similar results have been pub-

lished by Mazza (*Wien. Klin. Woch.*, No. 3) und by Biedl and Eggerth (*loc. cit.*, No. 5.)

A GOOD POINTER FOR MAKING INTRAVENOUS INJECTIONS

Doctor Godlewski states in the *Presse médicale* (Febr. 3), that he has taken blood from nursing infants for hemoculture and the Wassermann reaction, and more recently from military patients, without ever missing a vein, never making a false stab.

Godlewski avails himself of the fact that a vein can be displaced laterally, but only to a limited degree. A vein in the bend of the elbow being made prominent, the needle of a hypodermic syringe or any other suitable needle is thrust into the skin on one side of the vein—on the concave side, if the vein be somewhat curved. The needle pushes the vein away for from 2 to 5 mm., but then the limit of lateral displacement is attained and the point will enter without fail. The needle must be passed almost parallel to the surface of the arm obliquely toward the vein and close under the skin, otherwise it is certain to pass behind the vein.

SIMPLE METHOD OF PREVENTING PEDICULOSIS

A successful experiment aiming at the prevention of pediculosis is published by Captain J. A. Gunn in *The British Medical Journal* for May 5. It had been suggested that certain undervests made for soldiers and consisting of very thin and inexpensive muslin be treated with some antiparasitic preparation before dispatching them. The parasiticides appearing most promising were naphthalene and sulphur, and eventually a solution of these two substances in benzol, 1 percent of each, was adopted. The benzol evaporating in a few minutes, leaves the cloth impregnated with sulphur and naphthalene as a pulverulent residue. It was found that undervests treated in this manner did not cause any irritation when worn next to the skin and that they retained the antiparasitic substances sufficiently long for practical purposes.

The cost of these undervests, including that of dipping, was found to be very small, and several thousand of the garments were treated and given to officers and men at the seat of war. Information received by Doctor Gunn is to the effect that this treatment afforded a perfect protection against body-lice. Most of the men who wore these undervests remained free from the parasites when their immediate neighbors who were making use of other preventive means failed to escape being infested.

While the value of naphthalene as a parasiticide has been amply proved, the author refers to the fact that the efficacy of sulphur has been denied. However, he points out that sulphur acts only after conversion into a soluble sulphide and that this change is facilitated by its subdivision into such very minute particles as takes place in this process.

HOW TO GET RID OF FLIES

The Merchants' Association of New York is distributing a special bulletin containing some simple recipes for killing flies. Of these measures, we reproduce the following, which can be carried out easily and are claimed to be effective.

A formaldehyde solution of approximately the correct strength may be made by adding 3 teaspoonfuls of the concentrated formaldehyde solution, commercially known as formalin, to a pint of water. Similarly, a solution of sodium salicylate of the proper concentration may be obtained by dissolving 3 teaspoonfuls of the powder in a pint of water. An ordinary thin-walled drinking-glass is filled or partly filled with one of the solutions. A saucer or small plate in which is placed a piece of white blotting paper of the size of the dish is put bottom up over the goblet. The whole is then quickly inverted, a match placed under the edge of the glass, and the container is ready for use. As the solution oozing into the saucer dries out of it, the liquid seal at the edge of the inverted glass is broken and more liquid flows into the lower receptacle. Thus, the paper is always kept moist.

Or, mix one tablespoonful of cream, one of ground black pepper, and one of brown sugar. This mixture is poisonous to flies. Put in a saucer, darken all windows in the room, except one, and in that set the saucer.

It is also well to know that any odor pleasing to man is offensive to flies and will drive them away. Thus, for instance, put some oil of lavender, which may be diluted with some alcohol, into a glass atomizer and spray it around the rooms where there are flies. In the dining-room, spray it lavishly, even on the table-linen. The odor is very disagreeable to flies, while refreshing to most people. Geranium, mignonette, heliotrope, and white clover also are offensive to flies.

They especially dislike the odor of honeysuckle and hop-blossoms.

To clear the house of flies, burn pyrethrum powder. This stupefies the flies, but they must be swept up and burned.

According to a French scientist, flies have an intense aversion to the color blue, hence, decorating rooms in blue will help keep out flies.

For the purpose of preventing the breeding of flies in stables, barns, and outofdoors, borax is especially valuable. One pound of borax to 12 bushels of manure acts as a fly-poison without injuring the manurial qualities or farm stock. Scatter the borax over the manure and sprinkle with water.

Lye, chloride of lime or copperas (sulphate of iron) dissolved in water, crude carbolic acid or any kind of disinfectant may be used in vaults.

CALCIUM-THERAPY AGAINST HAY-FEVER

During a number of years, R. Emmerick and O. Loew have been prescribing calcium chloride as a prophylactic of hay-fever, as well as for curative purposes, and they report (*Muench. Med. Woch.*) generally satisfactory results from this course, some of the patients benefited having been victims for twenty years. However, the calcium chloride must be taken continuously, although half the ordinary dose suffices during winter. The standard dosage is: 3 Grams of the crystallized salt every day, or, a tablespoonful, three times a day, of a 20-percent solution. A vegetable diet, promoting alkalinization of the blood, is of advantage. No harm has resulted to the kidneys, at least not when they were healthy. Only very few persons were encountered who could not bear the calcium chloride.

AMERICAN-GROWN MEDICINAL DIGITALIS LUTEA

As many of our readers know, the department of pharmacy of the University of Minnesota has been conducting a careful study of the cultivation of digitalis. In the botanical garden connected with that school, the plant has been under cultivation for several years and it has been found possible to raise a digitalis equal in every respect to the foreign-grown which heretofore has been depended upon for the American market.

A paper dealing with the potency and standardization of Minnesota digitalis has been contributed by R. Edwin Morris to the March 15 number of *The Journal-Lancet*, page 176 and one of the points of special interest brought out in this paper is, that digitalis purpurea, the plant hitherto official, is not the only species of digitalis therapeutically potent. Doctor Morris asserts that, of the twenty-three or more species and the numerous varieties of this genus, digitalis ferruginea, lutea, lanata, and grandiflora exceed the purpurea in toxicity. The species lutea and lanata belong to the narrow-leaf form; and these have been found true to name and reproduce themselves perfectly.

The numerous assays of the various species of digitalis conducted under the auspices of the faculty, disclosed the interesting and important fact that digitalis lutea (grown in Minnesota) ranks in toxicity with the higher grades of digitalis purpurea. However, the absence of signs of irritation and the quiet lethal ending observed in experiments with cats was so marked as to suggest that digitalis lutea might be used therapeutically and possibly prove less liable than digitalis purpurea to give rise to gastro-intestinal irritation.

Both Doctor Morris and his associate, Doctor White, are now employing the tincture and the infusion of this digitalis lutea clinically in the wards of the University Hospital, and with the very best results. Later, they hope to present further data relative to this little-known member of the digitalis family.

PITUITARY GLAND FOR POSTDIPHTHERITIC RESPIRATORY PARALYSIS

Upon theoretic considerations, Helene Morgenstern (*Zeitschr. f. Kinderh.*, XIV, 4) tried pituitary gland in 2 instances of severe disturbance of swallowing and breathing, owing to postdiphtheritic paralysis so intense that a lethal end seemed certain. She injected 0.5 mil of pituitrin two to three times a day or 1 mil of pituglandol up to six times, improvement and cure following rapidly.

SECONDARY HEMORRHAGE AFTER REMOVAL OF ADENOIDS

While ordinarily a proper adenoid operation is not followed by any postoperative accidents, sight should not be lost of the fact that serious hemorrhage may take place. At a recent meeting of the Memphis Society of Ophthalmology and Oto-Laryngology, Doctor Savage reported (*Jour. Ophthal. & Oto-Laryng* March) on an experience in the case of a boy.

five years of age, upon whom he had operated, removing the tonsils in capsule and thoroughly extirpating the adenoids existing. The patient did well until the sixth day after the operation, when the Doctor was called, the child bleeding from nose and mouth.

On his arrival, bleeding had virtually ceased and the postpharyngeal space was filled with clotted blood. This was removed and a spray consisting of 1 : 2000 solution of adrenalin was left. Two nights later the hemorrhage recurred, the child bleeding for about three hours. Ice was placed on the bridge of the nose and absolute rest in bed for two days was ordered. After this, no further trouble occurred. Doctor Savage emphasizes that all bleeding came from the site of the removed adenoids and that the tonsillectomy wound was not concerned in it.

ECLAMPSIA AT THE BOSTON CITY HOSPITAL

A review of the cases of puerperal eclampsia that were observed in the Boston City Hospital in the course of twenty-three years is presented by Dr. E. B. Young in *The Boston Medical and Surgical Journal* for April 5. It includes observations in the cases of 183 women with threatened or actual eclampsia who had been admitted to the gynecological service of the hospital. In 36 out of the 183, the eclamptic symptoms appeared *post partum*; 6 were received as "threatened eclamptics" and left the hospital undelivered after having received treatment. The author's study of the case-histories presents many points of interest, which lead him to the following conclusions:

(1) The incidence of the attacks varies greatly in different years and without apparent cause. (2) Severe attacks occur mostly in primiparas between 20 to 25 years of age, and in the latter half of pregnancy. (3) In a little over one-half of the cases, the convulsions occur after delivery. (4) Non-operative delivery is most favorable for the mother. (5) The longer the convulsions continue, the greater the mortality. (6) Child mortality is high, whether deliveries are operative or nonoperative, owing to prematurity and toxemia. (7) High blood pressure increases the gravity of the prognosis. (8) Venesection is a useful procedure when there is high pressure and restlessness after delivery. (9) Induction of labor and delivery with the least possible operative interference offers the best chance of recovery for the mother. (10) Cesarean section is justified in certain cases in which delivery by other methods seems too prolonged or doubtful as to outcome.

PSORIASIS AFTER EMOTIONAL STRESS AND TRAUMA

According to *The Boston Medical Journal*, Lutati, an Italian army-surgeon, has been greatly impressed with the large number of cases of psoriasis developing for the first time among the soldiers. Out of 86 cases studied, 52 occurred in soldiers in the war zone, and constituted the first attacks for 18 of them. Many of these soldiers had been in the trenches and had taken part in combats.

It seems that the skin lesions developed after a nervous shock, a violent emotion or trauma, although the author is inclined to believe that the psoriasis occurs only when there already exists a latent tendency.

Gaucher, in France, has called the attention to a large number of psoriasis-cases among the soldiers.

SUPRARENAL EXTRACT AND AMEBIC DYSENTERY

A very interesting observation upon amebic dysentery is one reported by De la Rivière and Villerval in the *Paris Mèdical* for April 21, page 310. It was found that there are certain cases of amebic dysentery that are accompanied by symptoms of suprarenal insufficiency, such as physical depression, loss of strength and feeble pulse. While few observations in this direction have been made, the authors are convinced that there are a good many cases of this nature. The special feature is, the very low blood pressure. In these cases, emetine, which undoubtedly is the best remedy at our command, is found to be less effective and its value may be increased by associating with it adrenalin.

SUGAR FOR PURULENT WOUNDS

Anyone familiar with the practices of the laity, especially of the older generation and of the immigrants, knows of the use of sugar as a dressing for purulent wounds and for "destroying proud flesh." Having taken up this proposition systematically, Doctor V. Falkenheim makes report (*Muench. Med. Woch.*) that he has found sugar, indeed, an excellent application for infected wounds. The action, he declares, is surprising, the purulent wounds being free of pus within three or four days, with healthy granulation

started. After cleansing and drying the wound. he dusts it over with granulated sugar, puts on loosely a sterile tampon, covers with gauze or other fiber, then bandages. This he repeats every other day. Even extensive wounds heal rapidly. Deleterious effects never were observed.

IMPORTANT OBSERVATIONS AS TO SURGICAL SHOCK

Some very interesting observations, on the nature and treatment of shock have been contributed by two investigators of the British Research Committee, H. H. Dale and P. P. Laidlaw, to the March 24 number of *The British Medical Journal.*

These two writers, after exhaustive experimental study, have arrived at the conclusion that shock is due to the withdrawal of a large percentage of the blood-plasma from the arteries, from which it passes into the tissues and lymph-spaces. The veins are not distended, the large ones filling only very slowly, from the periphery inward, while the arteries become wellnigh empty and pulseless. The conclusion is, that this condition depends on the capillary tone, so that the blood from the arteries becomes stagnant in the relaxed capillary channels and lymph-spaces, the quantity reaching the veins being inadequate for filling the heart. The cardiac output, therefore, falls to a very low level. Oxidation being deficient, owing to the slowness of the capillary circulation through the muscles and other tissues needing a plentiful supply of oxygen, tissue acidity finally results, and this in turn leads to a further passage of the hemic water into the tissues by osmosis.

Of special interest are the suggestions for treatment based upon the conditions outlined. The conclusion of the authors is, that one indication, namely, the narrowing of the caliber of the arteries, is met by the use of pituitary glands. While adrenalin, the isolated principle, was found to have an undesirable tendency to produce obstruction of the circulation through the liver, the extract of the pituitary substance does not possess this drawback. Another indication in shock is met by the intravenous injection of a hypertonic Ringer's solution, for which the following formula is suggested:

Sodium chloride	Gm. 2
Potassium chloride	Gm. 0.05
Calcium chloride	Gm. 0.05
Water	Cc. 100

This probably acts in two ways: first, by increasing the capillary tone, although just how it does this is not clear; however, the calcium ions are believed to exert a specific action in reducing the abnormal permeability of the capillaries. The hypertonic solution probably also acts by osmosis, that is, by favoring the drainage of the blood tissues back into the vessels.

When there is defective oxidation, which leads to abnormal acidity, the intravenous administration of an alkali is suggested, such as the following solution:

Sodium chloride	Gm. 28
Sodium carbonate (crystalline)	Gm. 20
Distilled water	L. 2

The foregoing hypertonic alkaline saline combination, recommended by Hogan and Fischer, constitutes a valuable addition to the hypertonic saline solution with calcium as already mentioned.

MOUTH INFECTION, AND ARTHRITIS

Many physicians do not realize how much is being accomplished in dentistry and in medicine by the use of the x-ray in properly diagnosing diseases having their source in the teeth. Resort to this diagnostic method is of special importance in considering the etiology and treatment of cases of arthritis.

Alveolar abscesses, pyorrhea, and other infectious diseases in and about the teeth are now known to be the fundamental cause of many cases of rheumatism, so called.

This fact is strongly brought out by Harry A. Goldberg in *The Medical Record* for February 3, page 185, who declares that it is the duty of every physician, whenever called upon to treat any suspicious case, to determine whether there is or is not recognized disease in and around the alveolar processes. This can easily be determined by the use of the x-ray. He reports a number of interesting cases in which unsuspected foci of infection, particularly with streptococci, were ascertained by this method.

The editor of Clinical Medicine wishes to impress this point strongly upon the readers of this journal. In every case of rheumatism, arthritis, neuritis, lumbago or other systemic disease of obscure origin, see to it that the teeth are examined, and examined carefully, nor should you forget the importance of the x-ray in making your diagnosis.

PROCTITIS A TROUBLESOME DISEASE TOO OFTEN OVERLOOKED

Proctitis is one of the most common diseases of the rectum, as well as one of the most

chronic diseases of this portion of the body. This was brought out strongly by A. L. Sherman in *The Medical Record* for February 3, page 196. It may begin in early infancy and last for twenty, thirty or forty years. Many patients never show localized symptoms, but, sooner or later, there are likely to occur complications of greater or less severity. Eventually submucous and subcutaneous channels are formed and a seromucous or seropurulent fluid thereafter moistens the parts. Not infrequently abscesses are formed, according to the direction and extent of these channels. Pruritus is a common and exceedingly troublesome symptom of this stage of the disease. Hemorrhoids are another sequence of proctitis; in fact, Sherman speaks of this condition as being merely a symptom of a chronic inflammation of the rectum.

To treat the disease successfully, three expedients are advised: (1) The use of enemata of water at a temperature of 100 degrees, followed by rectal irrigations with hot water for one hour, twice daily. Salt may be added to the irrigating solution. (2) Local treatment of the rectum with a solution of phenol in sweet-almond-oil, of about 25- to 50-percent strength [any bland oil will do], this being an excellent remedy for moderating the superficial ulceration of the mucous membrane. (3) Opening the channels under local anesthesia, thereby permitting easy irrigation and finally causing them to heal from the bottom.

THE INTRAMUSCULAR OR SUBCUTANEOUS ADMINISTRATION OF NEOSALVARSAN

Despite the improved results in the treatment of syphilitic disease following the introduction of salvarsan, its general utilization, nevertheless, was impeded by the necessity of the intravenous administration of the remedy, which made it but little adapted for office-treatment, but involves the admission of patients to the hospital and their stay there for two or three days. When some years ago neosalvarsan was introduced, it was found that the arsenic in this new combination was being eliminated with greater rapidity than was the case with salvarsan, while larger doses were required to secure the same results. In fact, it was asserted that neosalvarsan is not so effective intravenously administered as is the older preparation.

It is probable, therefore, that it is an advantage to insure slower absorption of the arsenical, such as would occur if neosalvarsan were to be injected hypodermically.

The relative effectiveness of salvarsan and its substitutes given intravenously and of neosalvarsan and its substitutes given hypodermically or intramuscularly was tested in two series of patients, treated in two different hospitals, and the results have been published in *The British Medical Journal* for May 5, by Lieut.-Col. L. W. Harrison, Maj. C. F. White, and Mr. C. H. Mills. From their experiences, which are described in detail, it appears that the intramuscular or subcutaneous injection of neosalvarsan, novarsenobenzol, and novarsenobillon is superior in immediate therapeutic effect to that of the intravenous injection of salvarsan, kharsivan, arsenobenzol, and arsenobillon. Spirochetes disappear from syphilitic lesions just as rapidly after the first intramuscular as after the first intravenous injections, and the Wassermann reaction is more quickly influenced. When the dose of neosalvarsan is dissolved in 1 mil (1 Cc.) of a 4-percent stovaine solution and some emulsion of creo-camph cream, the discomfort is obviated to a great extent.

EMETINE IN PHTHISIS

The China Medical Journal for May, 1915 (*Prog. Méd.*, Nov. 3, 1916, through *Med. Times*, April, 1917), contains W. H. Tatchell's account of his remarkable success with 155 injections of emetine (1-3 to 1 grain daily; sometimes 1 grain twice daily); in 23 cases of phthisis. Of these, 13 were bilateral cases, far advanced, or suffering from hemoptysis and admitted into the hospital *in extremis*. One lung was extensively involved in 6, and in 4 less severely so.

Generally, the first injection lessened the hemorrhage; the second, still more, and then the dose was reduced to 2-3 and 1-3 of a grain, until bleeding stopped entirely. None of them received more than 7 grains in all. One died on the second day; another on the fifth; 16 were not heard from again; 5 remained without any return of the bleeding (being under frequent observation) for from three to eighteen months, and their diseased areas meantime consolidated. Tatchell concludes that emetine possesses, besides its hemostatic, also some great recuperative power, which probably may be availed of in a variety of diseases, including cholera and sprue. He will not say as to whether this remedy is in any degree a specific for phthisis, but in the few cases kept under observation the bacilli disappeared.

Miscellaneous Articles

Morphine and Hyoscine Amnesia

MUCH has been written in the past three years for and against twilight sleep, and, inasmuch as there is a great prejudice among the medical profession against this procedure, it will do no harm to keep the subject before that body. Chloroform and ether were compelled to run the same gauntlet and with very much the same arguments brought against them. But, as time has gone on, they have come into general use despite the adverse criticism. So will morphine and hyoscine amnesia in the long run come to be generally used.

After seven years' use with the most gratifying results, one is not likely to drop such a measure of relieving suffering, because of some adverse criticism, even in high places. I have been watching the literature on this subject for all this time and I have been exchanging ideas with my fellow practitioners, in season and out of season, whenever I could find one that was not so prejudiced that his ideas were worthless, and I have been using the measure more and more as time has gone by. I use it in obstetrics, in surgery, and in severe pain. This procedure is like any other where powerful drugs are administered; the caution ever to mix brains with them must not be forgotten.

I have been very much puzzled at the report from the Michael Reese Hospital (Chicago) on morphine and hyoscine amnesia, that appeared in *The Journal of the American Medical Association* some time ago. If one were influenced by such reports, he never would even give the remedy a trial. Fortunately for me, I had been using the method for a goodly number of years before this report was published and my results were so gratifying that I have kept steadily on without being influenced by such reports, except to be extra careful about my technic and to give my patients very close observation while administering the drugs.

Quite a general impression has gone out that the only place where morphine and hyoscine amnesia could be used is in a hospital. With all due respect for my fellow physicians whose ideas may differ from mine, I cannot agree with this. I have had experience both in institutions and out, and my experience outside has been more gratifying in private practice than while in the institution. However, I think this can be accounted for by the fact that I first began using morphine and hyoscine amnesia while I was in an institution, while since leaving the institution I have become better acquainted with my remedy and the technic of administering the same. Experience surely counts. The exact number of labor-cases in which I have used twilight sleep I cannot give, as at the first I did not keep a record; however, of late years, I have kept complete records, and I know I have administered the remedy over 200 times, and the whole of these 200 have been in private practice, mostly in the country.

I wish to call my readers' attention to the most excellent paper written by Dr. John Osborn Polak, of Brooklyn, and published in *The Journal of the American Medical Association* for September 18, 1915. Every physician who is doing obstetrical work should study this article with care and let the facts contained therein soak into his gray matter good and deep. My own experience has coincided with that of Doctors Polak and Beach.

The criticisms I have heard offered against the method have been that it is dangerous both to the mother and the child; that the children never do so well after its use; that it hastens labor; that it is a cause of postpartum hemorrhage; that it affects the mentality of the children, and some criticisms that are even more imbecile than this last one.

Out of over 200 cases, I have not had a single child born dead. Two died; one within an hour and a half and one after four hours. Just what was the cause of death, I do not know, as I was not permitted to make a necropsy. The first babe breathed spasmodically at varying intervals during the

hour and a half that it lived. Both these babies very probably might have been saved had I had a pulmotor. The second baby never drew a breath, although we kept it alive for over four hours by artificial means. I have seen other babies go in the same way when morphine and hyoscine were not used; so, I am satisfied that these drugs had nothing to do with the babies' deaths. The first case was one of breach presentation, in a multipara, the second was that of a primipara, with forceps delivery. The birth was not protracted, neither was it a difficult one, so, I have always been at a loss to know just why the child died. In both cases, the recovery of the mothers was normal.

I have had one postpartum hemorrhage in these cases; this, though, was caused by the mother putting the child to the breast within an hour and a half after delivery; hence, the medication had nothing to do with this. My "twilight" babies have done just as well as those that were not twilight-delivered; consequently there is no use wasting time on this criticism. Anyone who has had experience knows that, if anything, the method retards labor slightly, but, the advantages are so much in its favor that this need not be considered. According to my own experience, no delay is occasioned if pituitrin is used at the proper time. I do not use the forceps once now where I used them thrice before I used morphine, hyoscine, and pituitrin, and my patients come through refreshed and in a much better condition in every way.

I do not advocate twilight sleep in every case. The man who does this shows poor judgment. It would be unwise to use it even in many cases where there is no primary inertia or pelvic contraction, or in the presence of other obstetric accidents. Often one will find, after arriving and making the examination, that the cervix is fully dilated, and you should know, by the way that the pains are coming, by the force they are exerting and the pliability of the parts, that the child would be born before your remedy would have time to act. In these cases, a few whiffs of chloroform are indicated, as the head comes down on the perineum.

Twilight sleep is a first-stage procedure and is especially applicable to the nervous type of women, in whom the labor is prolonged, or to those who do not bear pain well and fight against the pains. In this class of cases, it works marvels. Doctor Polak says: "Daemmerschlaf may be used in any labor in which the expulsive pains are actually established and there is no marked disproportion between the head and the pelvis. It is especially suitable in long, painful, first-stage labors or in minor degrees of contraction when it is desirable to give the woman a full test of labor, and in the neurotic woman of the mentally and physically unfit class."

My own experience with this method has been most beautifully outlined in Doctor Polak's paragraph, as follows: "From our experience, we can state with reasonable positiveness that this method has certain definite advantages; namely: first, the patient, in from 70 to 80 percent of the cases, has a practically painless labor; second, the nerve exhaustion which comes after prolonged labor is absent when morphine and scopolamine have been properly used; third, the milk secretion is definitely increased, as shown by the gain in weight of the children in this series; fourth, the cervix dilates more easily under this form of medication, hence, cervical injuries are less frequent; fifth, the number of midplane forceps operations is diminished; sixth, the cardiac patients, even where there is some break in the compensation, go through labor with a minimum of nervous apprehension and less muscular effort; seventh, the toxemic cases, even with increased blood pressure, go through labor with less likelihood of convulsions, and the urinary output is not affected; finally, more babies are born alive, owing to the more accurate observation of the fetal heart and the observance of obstetric indications than is common under ordinary methods. The dangers to the mother are practically nil; to the child, the danger is from the prolongation of the second stage, due to overdosage, and there is an interrelation between the two."

My method of procedure is as follows: Upon arriving at the bedside, I make a careful examination and ascertain the baby's position, listen to the fetal heart, and make inquiries and observations just the same as though I were not going to use twilight sleep. If the labor-pains are well established and the cervix is dilating, I administer 1-8 grain of morphine with hyoscine hydrobromide, 1-200 grain, or the hyoscine hydrobromide, and cactin, 1-128 grain. I wait about three-quarters of an hour, then administer 1-200 to 1-100 grain of hyoscine, and continue this until the patient gets so confused mentally that she cannot remember the time the last dose was given. I tell the woman the time when each dose is given and ask her to remember just as though I were depending upon her to be the timekeeper. I continue

this procedure until the cervix is well dilated.

After an hour or so, if the labor is not making the proper progress, during this second stage, I give 1 mil (Cc.) of pituitrin; and usually this is all that is needed. Once in a while after the lapse of half an hour a second dose of pituitrin may be required. It is very seldom that a second dose of morphine is necessary. still, occasionally I find it advisable when the cervix is very slow in dilating. If the interval between the expulsion of the head and the last dose of the hyoscine has been far enough apart so that the patient complains of considerable pain when the pains come on, I give a few drops of chloroform as the head is being expelled. Those who have never used this method will be very much surprised how little chloroform it will take to keep their patients under influence. If I feel that the heart needs a second or a third dose of cactin, I give it. The cactin is intended to counteract any depressing influence the hyoscine may have on the heart either of the mother or the child.

Some have asserted that there is a difference in the action of hyoscine and scopolamine, but, I have watched them both very carefully and I am unable to detect any difference. Possibly others are closer and more discriminating observers than I.

The only complaint my patients make is about the dryness in the throat caused by the hyoscine, but this is insignificant. A sup of water every once in a while is all that is necessary.

I think I can close my paper no better than by quoting Doctor Polak's summary, as follows:

"(1) The twilight-sleep state is a reality and is applicable in *any labor* in which there is no primary inertia or marked pelvic contraction and where no obstetric accidents are present. (2) It is especially applicable to nervous women of the physically unfit type. (3) It is a valuable adjunct in the management of borderline contractions, for it allows the woman a full test of labor. (4) It is distinctly a first-stage procedure and bears the same relation to the first stage as chloroform and nitrous oxide does to the second stage: it relieves the pain but does not inhibit the progress of labor. (5) It is particularly useful in cardiac cases, as it relieves the nervous apprehension and secures dilatation, with less muscular effort. (6) It diminishes the shock of labor, whether labor be normal, prolonged or operative. (7) It does not diminish the milk supply. (8) It does not predispose to postpartum hemorrhage. (9) It tends to decrease the number of high forceps operations."

In my own experience, when hyoscine-morphine is used with pituitrin, it reduces the forceps operations at least 75 percent.

"Daemmerschlaf" has a distinct place in obstetrical practice, not alone in the hospital, but in private practice; however, those using it must stay by the patient and observe its action and must pay careful attention to every detail of the case, from start to finish. It is not a remedy that can be given and be left to do the rest. Personally I have had just as good results in a well-ordered home as in hospitals, and I see no reason why any intelligent physician can not do as well.

Doctor Wakefield well expressed my sentiments when he said, "I should just as soon consider performing a surgical operation without an anesthetic as to conduct a labor without scopolamine amnesia. Skilfully administered, the best interests both of mother and of child are advanced by its use." There is much more that he says that is right to the point, but, if any are interested and wish to refresh their memories, they can do so by looking it up in the March (1915) number of *The American Journal of Obstetrics* also in The American Journal of Clinical Medicine for August, 1915, page 750.

F. E. Brauchi.

Cambridge, Nebr.

DRUG-ADDICTIONS

Addictions, in various forms, have existed ever since, one might say, the beginning of the human race. The opium-habit, to our knowledge, has existed for many centuries. Today, there are many different drug-addictions. Opium in its various forms, cocaine, nitroglycerin, chloral, bromides (one of the worst), and lastly, though by no means least, aspirin; the latter threatening eventually to become a serious menace. Keith, of the Internal Revenue Bureau, reports that there are more than two million drug users in the United States. *Per capita*, up to the time of the present European war, this country had more habitués than there were in Europe (I exclude the Mongolians). This is easily explained, because the predominating cause is so common in America that it is called the "American disease"—I mean neurasthenia, or nervous prostration, in its various forms.

The Harrison-antinarcotic law has done more harm, up to now, than good, and some

high authorites even insist that it has increased drug-addiction. The law has fallen especially heavily upon those not able financially to undergo treatment at some reputable institution. Yet, these people are sick—more seriously sick than if they had some acute disease, so far as real suffering and actual pain is concerned. They already are sick before they become addicted and the addiction aggravates very much their prior disease. The sudden withdrawal of the accustomed narcotic is most inhuman and cruel; they require the services of the most expert medical men, who can handle them in such a way that they will not suffer.

No law passed by congress, it matters not how drastic, will ever prevent suffering humanity from seeking relief—self-protection is human. This is why I say the law, as it stands, has made matters worse; and the worst feature is, it has caused unscrupulous men to start irresponsible institutions all over, especially in large cities, and enabled medical parasites calling themselves drug-specialists to reap a harvest from these sick unfortunate people by promising them the "world with a fence around it" for whatever sum of money they can extract; only to dope the victim with more and more of his accustomed poison, while assuring him that improvement is going on finely.

In Louisiana, a state law (known as Act 157 of 1894) exists, which says: "When a drug- or liquor-addict presents a petition to the district judge, claiming to be an inebriate and not able to pay for treatment, the judge must send the petitioner to a reputable institution in the state, devoted exclusively to that work, the expense to be borne by the parish or city in which the patient lives." The only cost attached to this is $3.50 for the notary. The petition is usually signed in chambers, without publicity. Similar laws are in force in thirty-six of the states. Under this act, the Fenwick Sanitarium has had many patients sent to it from almost every parish in the state and from many of the larger cities.

It is possible that one time in life these unfortunates were quite different citizens, and, if those who condemn them only knew the difficulties and struggles that have been theirs, they would spread over them the mantle of charity and at least say, naught; for, they do not know when they themselves, or some of their loved ones, may be in the same condition.

All drug-addicts must be classified under one of four heads: (1) neurotic, (2) neuropathic, (3) psychopathic, (4) victims of traumatism or of shock from acute disease, fright or surprise. Fortunately, the vast majority are of the neurotic or neurasthenic type, and are amenable to treatment.

The outlook for the permanent cure of neuropathics or psychopathics is bad. These latter may stay apparently well for several years, then, when least expected, go to pieces. Not so, however, with the neurotics and neurasthenics, who constitute, by big odds, the largest percentage. The addiction often masks the underlying condition of the patient. I will consider only the neurasthenic addicts.

Neurasthenia, so prevalent in America, is rarely recognized in its incipiency. Hence, these unfortunates when taken ill with some disease giving rise to pain or insomnia, or, maybe after suffering traumatism, are given hypodermatics of morphine, by the family doctor, and thus only too often acquire the habit unconsciously or subconsciously. Physicians administer morphine much too often. At other times, a neurasthenic, on his periodical drunks, finds that his doctor sobers him up with a 1-2-grain hypodermic dose of morphine, and he soon decides that it is cheaper for him to do this himself. Sometimes the patient uses first the hypnotic and then a narcotic, switching from one to the other, and finally he winds up by continuing the narcotic, that is, opium or some of its derivatives.

We can justly blame the medical profession for the vast majority of drug-users. The patient notices that the stimulation afforded by the doctor brings relief, so, he goes on seeking continuous stimulation, not, indeed, because he needs it, not because he craves relief from a something that he can not explain, but just because something worries him. In other words, these sufferers seek relief from their tormenting nerve teasing or nerve unrest, the result of the exhaustion of the brain-cells; and thus they go on seeking relief by these artificial means, until they are hopelessly addicted ere they realize it.

I need not describe the many and varied symptoms caused by drug-addiction; the habit is soon recognized by the attending physician, if he is not told of it by the patient. The addict has either a puffy, edematous look or else just the reverse, great emaciation with extreme pallor of a more or less yellow cast, shriveled muscles, some amnesia and aphasia, disturbances of vision (such as farsightedness, double vision, and, in some instances, almost complete amaurosis), disturbances of

hearing (deficient acuteness of sound-perception, frequently even hearing noises that do not exist), unsteadiness, general nervous disequilibrium, frequent attacks of tachycardia or bradycardia, disturbances of digestion, enlargement of the liver, constipation at times and diarrhea at others. With these, there are seen various other symptoms, such as unstable temperament or insomnia. When the victim suddenly is deprived of the drug, there occur violent outbursts of acute coryza, the sneezing being most frequent (the sneezing sometimes keeps up for several months after any method of treatment), vomiting, profuse diarrhea, erections, spermatorrhea, and general symptoms of shock, such as a feeble and slow pulse, general pallor, yawning, profuse perspiration. These are the most common symptoms, but there are many deviations from them. Each is an individual case presenting individual symptoms and requiring special attention.

The vast majority of drug-patients are curable, if, after the craving is removed, the neurasthenia is properly treated; but, success can be accomplished only in a real and well-regulated sanatorium. The accustomed drug must be removed without permitting a shock to the system, and for this the gradual-withdrawal method is the preferable one. Once withdrawn and the patient has no more desire, by no means indicates a cure—it is just the start, for, unless the nervous system is then built up and nerve integrity or will-power reestablished, it is useless to expect enduring success. It is wonderful how people ignorant on this subject will express themselves in the lay press. I have seen quotations in papers, saying that the cure was completed in from three to four days by means of the hyoscine-treatment. From my experience, this is a myth. It is evident that such statements have been made by persons who have not kept in touch with the subsequent life of the patients. With such treatment, I wager any man that 90 percent, if not more, of the patients so treated return to the former habit and condition.

Years ago, I used hyoscine for some time, studied its effects upon these patients, upon well persons, and upon lower animals, and I can unhesitatingly say that it has no place in the treatment of these subjects. Indeed, I am convinced that it is harmful. In the Fenwick Sanitarium, the system of treatment is divided into (1) drug-addiction, (2) electrotherapy, (3) hydrotherapy, (4) mechanotherapy, (5) psychotherapy. The most effective measures are hydrotherapy and psychotherapy, supplemented by good, nutritious food.

The Harrison act, intended for a good purpose, falls short, and success will be obtained in this direction only when the government assumes control of the medical profession. This is an important medical problem and can be successfully handled only through the medical profession.

FRANK F. YOUNG.

Covington, La.

AN INDICTMENT OF OPIUM AND ITS DERIVATIVES

After having made a close study of narcotic-drug habitués for the last eighteen months and having seen the wrecked young lives and blasted hopes, I have decided to write a few words on the curse of these habit-drugs.

From a medical standpoint, we are all aware of the wonders (imagined) wrought by morphine, although as a curative agent, judging by my observation, it is valueless. Still, it is said, and possibly truthfully, that morphine relaxes the tissues and produces rest and, therefore, gives nature an opportunity to aid the diseased organ. However, if the relief afforded lasts only a brief time, the drug must be repeated, until finally the disease enters into a chronic state. The dose now is increased, and then, as if by magic, the patient recovers from the disease. But he finds that he does not feel quite right and sends for the doctor. The doctor finds his patient writhing in misery, nervous, can not lie still, is vomiting, has clammy perspiration, cramps, diarrhea, anxious expression; in fact, an awfully sick patient. The doctor takes a look, feels the pulse, asks for water and a teaspoon, pulls out his hypodermic case, gets a few morphine tablets, injects a dose, and in five minutes the patient is feeling fine. Then he pronounces the doctor the best doctor in the U. S. A.

But, as soon as the effects of the drug wear off, the man begins to feel uncomfortable and begins to inquire from neighbors and friends what kind of medicine the doctor gave him. They tell. Well, he thinks, it is cheaper to get the medicine and relieve himself than it is to pay the doctor from $2.50 to $3.00 per day. He gets a hypodermic case, buys morphine tablets and proceeds to relieve himself. He succeeds and is happy.

Another way some physicians have a habit of doing. They will leave, maybe, a dozen tablets and give directions to give one when-

ever it is necessary. Well, I am getting to the real and material part of my story. When these patients want to break away from the little white tablets and the nice little "hypo" that gave them so much relief, they find it impossible. They begin to brood. They tell their friends or a physician and, lo, the man is told that he is a "dope"-fiend. Having heard of such people, he had always had a horror of coming in contact with them; so, he broods, worries, wants to be alone. Then there arises in his mind a desire for something. He casts around and finally finds solace in his white tablets or his "hypo." He resigns himself to his fate and gradually becomes a confirmed morphiomaniac (or morphinomaniac).

I need not discuss the circumstances of these unfortunates. Once, they were respectable, held responsible positions, were leaders, but now they are social outcasts, beggars, petty thieves, inveterate liars, deceitful, unclean, and of unkempt hair. Sanitary conditions are foreign to them. They become as vagabonds upon the earth, go from pillar to post in quest of other "morphines," who will make them forget their plight and feel as they did in days of yore. But this is only temporary and they finally relapse into the same black mood.

But, of all the narcotics, cocaine is the most demoralizing and degrading; it affects the higher centers of man. There is an irresistible craze or crave for it, and the habitué cannot refrain from employment of the drug if he can possibly get it. When he succeeds in getting a dose, in a few minutes he experiences an exuberance of spirits, quickened pulse, loquacity, hallucinations of sight, of hearing and feeling. Everyone he meets he thinks is "after him." He shuns policemen. He hears noises. He has hallucinations of persecution, feels bugs and creepy things under his skin and tries to pick them out. Finally, when the effect dies out, he is exhausted and seeks another dose. The only comfort he gets is, his "shot" or snuff of the "snow."

Heroin affects the person similarly as does cocaine. The users are generally sporting-people and youths. Sporting-people, especially women, consider it "lucky," but the youths get to using it in an innocent manner. You know the harm done to the membranes of the nose by the sniffing of heroin.

Now we come to the opium-smoker. This is least harmful of all the addictions. The smoker is well-dressed, clean, and a successful gambler; he believes in high-life. Before I came in contact with these people, I had heard and read of the opium-smoker's pipe-dreams; but, on a whole, that is a fallacy. The narcotic-drug user is harmless when he has his particular drug. It is believed that they are harmful when they have it. That is a big mistake. The lack of the drug is the thing that makes them desperate, lie, steal, beg, and borrow.

The Harrison law, in its intent, is, to benefit mankind, but, in practice, we find it very difficult to understand. It was designed as a revenue measure, and not as a prohibitive one. So says the federal judge of the west Tennessee district. There has been secured great relief of pain and of suffering with the narcotics, but I believe that more harm has resulted therefrom than good. I believe all users should have a supply. I treat and have treated the condition very successfully, as shown in my article that appeared in Clinical Medicine for July last. The suffering, the crimes, the untold physical and mental torture of the habitué have caused me to think and to believe that opium is one of the greatest curses visited upon the present generation.

A. L. Saunders.

Memphis, Tenn.

CALCIUM SULPHIDE IN SCARLATINA

Just a little boost for calcium sulphide. A case of scarlet-fever, five other children in the house exposed. Put them all on calcium sulphide. No more cases. But, here comes the test.

Case of chicken-pox. A young lady in the house and several boys and little girls. Young lady begged for something to keep her from taking it—thought a lot of her face. I said, sure there was, if she would take the medicine properly. She promised not to miss a dose. I gave her a handful of calcium-sulphide granules. No chicken-pox for her. Every other person in the house got the disease.

How can we fix calcium sulphide so as to give it to babies too young to swallow the granules?

J. M. Thompson.

Mason, Tex.

[The problem how to give calcium sulphide and other drugs to babies too young to swallow pills or granules is one that has puzzled many physicians. The present writer found it expedient to crush the granules and work them up with a little apple-sauce or fruit-juice. This mixture is taken quite

readily by babies over, say, four months of age. Smaller infants will have to be given the calcium sulphide in solution mixed with milk. In the case of nurslings, the drug may be administered indirectly, through the mother, since a portion of it is eliminated with the mammary secretion. Or, the powdered granules may be placed on the tongue of the infant and washed down with a little water. Solutions of calcium sulphide must be prepared fresh daily, because they rapidly deteriorate.—ED.]

WHAT PHYSICIANS ARE DOING IN ONE NEW JERSEY TOWN

The Physicians' War-Relief Association of East Orange, New Jersey, includes as members all the physicians of the city of East Orange, and Dr. William B. Graves, president of the Veterans' Association of Battery A, is also the president of this association. The scope of the work of this association is, to respond to calls from the local Red-Cross Society, to attend cases of need and sickness in the families of the soldiers, to look after the practices of physicians of East Orange who may be away on military duty, and to keep in touch with the families of these same physicians and see to it that they are provided for in every way.

The members, through official action, have offered their services to the Home Guard for any medical service in the city and to the Red-Cross Society to give instructions in surgical and medical aid; they also hold themselves in readiness to aid in forwarding any measures for maintaining the health of the town.

At a recent meeting, Dr. Joseph MacDonald Jr., a member of the U. S. Medical Reserve Corps and publisher of *The American Journal of Surgery*, addressed the association on the work of the Medical Reserve Corps.

Physicians all over the country should be organizing societies of this kind, so that the medical profession may be prepared to do its share in the great work confronting the country.

NARCOTIC-BLANKS NOT REQUIRED FOR COCAINE SUBSTITUTES

The following ruling has recently been made by W. H. Osborn, commissioner of internal revenue, in treasury decision No. 2479, which we quote in its entirety, as follows:

"The ruling contained in T. D. 2194 of April 26, 1915, holding synthetic substitutes subject to the provisions of the act of December 17, 1914, and requiring manufacturers of, dealers in, and physicians prescribing any such substitutes as therein defined to register and otherwise conform to the Harrison narcotic law and the regulations issued thereunder is hereby revoked, to take effect this date."

This ruling refers, of course, to socalled "substitutes" for cocaine, which were not specifically mentioned in the Harrison law, but which the Internal Revenue Department ruled, on April 26, 1915, should come under its operation, such substitutes including novocaine, stovaine, orthoform, and similar substances. It has been ruled that narcotic-blanks no longer are required in ordering preparations of this class.

THINGS NOT DONE BEFORE

The things that haven't been done before,
Those are the things to try.
Columbus dreamed of an unknown shore
At the rim of the far-flung sky.
And his heart was bold and his faith was strong
As he ventured with dangers new,
And he paid no heed to the jeering throng
Or the fears of a doubting crew.

The many who follow the beaten track
With guideposts on the way,
They live, and have lived for ages back,
With a chart for every day;
Someone has told them it's safe to go
On the road he has traveled o'er,
And all that they ever strive to know
Are the things that were known before.

The few strike out, without map or chart,
Where never a man has been;
From the beaten paths they draw apart,
To see what no man has seen.
There are deeds they hunger alone to do,
Tho' battered and bruised and sore;
They blaze the path for the many who
Do nothing not done before.

The things that haven't been done before
Are the tasks worth while today.
Are you one of the flock that follows or
Are you one that will lead the way?
Are you one of the timid souls that quail
At the jeers of a doubting crew
Or dare you, whether you win or fail,
Strike out for a goal that's new?

J. F. ROEMER.

Waukegan, Ill.

[Not everyone can do "the things that haven't been done before", because not everyone has the powerful imagination required, nor the courage to strike out in new paths. Those who do are lonely, often; they are ridiculed and jeered at, always.

Many times, they are not granted the satisfaction of knowing that they were right. Yet, they go on and on, working, striving, seeking—these pioneers of progress. The author of this splendid poem is an old friend of ours and a frequent contributor to CLINICAL MEDICINE. We are glad to reprint his stimulating tribute to the pioneers who dare, which was fittingly contributed to the transactions of the fifth annual convention of The American Association for the Study of Spondylotherapy.—ED.]

PREVALENCE OF CANCER IN INDIA

A question or two in regard to your article about cancer and Doctor Merriam's views about meat-eaters, printed in the March issue (p. 180): How do the Hindus compare with said views? They do not eat meat. Have you any statistics or knowledge as to the prevalence of cancer in India? If so, will you kindly publish the same? They are vegetarians, pure and simple.

G. P. GEHRING.

Los Angeles, Cal.

[This is, indeed, an important question. If the views of the investigators quoted are correct, there should be very little cancer among the Hindus. There seems to be very little authoritative statistical data—and till we get it, the problem must remain unsolved so far as we are concerned.—ED.]

HOTEL SERVES NEW WARTIME BREAD

In response to the suggestion of official Washington, that everything possible be done to conserve the nation's food supply, the Hotel Martinique has placed on its menu a special kind of bread that represents a saving of wheat flour. It has been named "Martinique Old Glory Bread," and it is said to be even more nutritious than the ordinary bread. Jules Biron, the Martinique's French chef, says that a similar kind of bread is being eaten now throughout France. He gives the recipe as follows: 4 ounces of rye flour, 12 ounces of whole wheat, 3 pounds of white flour, 1 quart of water, 1-2 ounce of yeast, 1 ounce of salt. Besides containing more nutriment, this wartime bread will keep much longer. It can be kept at least a week without getting stale, and it is really at its best several days after it is baked.

The Martinique encourages the consumption of the new bread by making an appeal to its guests on a sticker fastened to the menu cards. The message on the sticker tells about the introduction of the economy-bread and suggests that it is everybody's patriotic duty to make some self-sacrifice, to help the food-conservation movement. Guests of the hotel are taking to the new bread enthusiastically. Not a few say that its flavor is such that there is no necessity of using butter.

[If "war-bread" never contains any less objectionable constituents than those of which "Martinique Old Glory Bread" is composed, we certainly shall "have no kick coming." The recipe is inviting, and it seems to us that bread made in this manner must be preferable to that made of fine wheat flour. The salient point is, however, the observation of economy in a food stuff of the importance of bread.—ED.]

FOOD PRICES

Food-products now are very high—
Essentials we must have or die,
Four pecks of spuds Tom Walker gained,
Left him of three prized dollars drained;
Then he acquired four pounds of calf,
That cost ten shillings and a half.
Soon perspiration bathed Tom's skin,
Observed by clerk, who took him in.
He sought, and found, a wooden chair
In which to sit and check despair,
Until a cab could take him home,
While feeling queer beneath his dome.
He knew his wife expected more
Than he had bought at grocery store.
Her orders were for costly food
To satisfy their hungry brood
At table wanting beef or lamb
Ere being helped to pie and jam.
Which makes us think that we must give
All income earned to dress and live.
Condition grave the poor deplore,
While people starve on every shore,
Where wo is spread and dire dismay;
Which prompts those short of fund to say:
"The one who brings food prices down
Should be extolled and wear a crown."

C. S. ELDRIDGE.

Chicago, Ill.

TRAPSHOOTING FOR THE DOCTOR

Nearly twenty years ago, I began to hunt for some form of recreation best suited for the busy professional man, such as would offer the maximum amount of pleasure and relaxation from the steady grind and long hours of the busy doctor.

The annual trip into the "big woods" certainly is a "life-saver", and many professional men look forward to this "back to nature" jaunt with all the pleasure of anticipation and after such a trip feel rejuvenated and physically fit for some time. However,

two weeks isn't enough to keep one in good condition for a whole year, as I learned from experience; so, I gave trapshooting a thorough trial. And I believe, after all these years, that truly, this is the "sport alluring". I am glad to see that doctors in large and increasing "bunches" are appearing at the traps, and I know well they will "stick"; for, once a trapshooter, always a trapshooter.

Some time ago, I was asked by a doctor friend to "look him over" and make out a "repair slip". (He owns an auto.) He said jokingly, "My wife says I appear all run down." Like many other professional men, he was making a big effort to sell about sixteen hours of his time each day, without the necessary relaxation, and, as he started out with a pretty good body, it required several years of continued effort before he discovered that the human machine has its limits. He was thoroughly familiar with this fact *for the other fellow*, but hadn't stopped to consider that he himself was no exception. A great many doctors know a lot about prescribing for and advising the other fellow, but never stop to think about their own needs, until some friction in the machinery attracts attention.

Now, the doctor is constructed along the same lines as the rest of the human family, governed by the same laws and subject to the same influences that make or mar a life. The old "saw" that "all work and no play makes Jack a dull boy" is a true one and it applies to the grownup as well as to the boy. And this applies especially to the doctor, for the reason that, not like the man of regular hours, *he* is on duty *all* hours of the day or night, and complete relaxation from professional duties is denied him, unless he gets entirely away from his place of business and selects some form of recreation that will absolutely make him forget that he is a physician, while reminding him that he is "just a man".

Perhaps this is a long preamble with which to introduce my subject, but it is well sometimes to get down to fundamentals.

First of all, the one great thing that elevates man above the other animals is sociability; and we know very well that the man who lacks this element to a very marked degree is defective. But, trapshooting and sociability are inseparable, and it is the sociability of competition, the friendly striving to do as well or a little better than the other fellow that counts.

Secondly, trapshooting takes one absolutely and entirely away from any and all business, affording complete rslaxation from business or professional cares; and I know that this one thing alone is worth the price.

Trapshooting is an outdoor game. The shooting-grounds are usually located a little out of town, in the open, where lots of room and fresh air are assured. And don't forget the fact that there is a goodly amount of exercise connected with the game. The raising of an 8-pound gun to the shoulder a hundred times; the swing of the gun to follow the flight of the swiftly flying target, and the set of the muscles against the recoil of the load; the telegraphic message from the eye to the target, back to the brain and then to the trigger-finger in smallest fraction of a second means exercise, with a capital E. And one of the very first important valuable facts one learns quite early in the game is, that the

DR. LEROY A. NEWTON

nervous system must be in "tune" or as near perfect as is humanly possible.

This is one sport that will make a man cut out the bad habits, when he learns (as he will) that bad habits and trapshooting cannot go together.

I know men who train for a tournament just as carefully as does the prizefighter. They leave off the alcohol, tea, and coffee, cut down the tobacco to the minimum amount, and eat plain food, seeing to it particularly that the waste products of the body

are eliminated. Then, when they step out on the firing-line, they feel "fit to break them all." This is the ideal condition, though not always possible for the doctor, who may have been out all night on an obstetric case, or who has worried for twenty-four or forty-eight hours over a seriously ill patient; but, if he once has tried trapshooting, he will find himself thinking of the subject frequently and will gradually adopt a course of living, as far as possible, that will give him the maximum amount of good health.

Now, doctor, don't go out to the traps with a light gun—8 pounds or over is the proper weight to take up some of the recoil. The light gun will pound you unmercifully, especially if the gun does not fit you. And don't let your enthusiastic friend induce you to shoot at more than 25 targets the first time out.

I have known many men to quit trapshooting after the first attempt, just because they were persuaded to shoot at a hundred or more targets on their first visit to the traps. After three or four trips to the shooting-grounds, you will find that the shoulder has adjusted itself to the recoil so nicely (especially if the gun fits) that a hundred shots may be fired without any discomfort.

Don't take your field-gun to the traps and expect to do good work with it. The brush- or field-gun is too light and the stock is too "crooked". In other words, the trap-gun must have a very straight stock (around a 2-inch drop), and there must not be very much difference between the drop of the "comb" and the "heel".

There is no use to go into all of the reasons for these facts, in this short article, but I may say that they have been learned at the traps by men of experience, after many years of experiment, and adopted both by professionals and amateurs. There are several "try-guns" that can be taken to the traps and adjusted to fit anyone, so that they may be fired at targets, and in that way one may get a practical fit.

Don't be induced to shoot a heavy load; anything above 3 drams of powder not only is superfluous, but actually militates against accurate shooting.

After you have been fitted with a gun, let it severely alone so far as alterations are concerned.. You will find many shooters who are constantly altering their guns. They get a new gun made to order that fits them, make a good score at the traps, and then some day they go out not feeling quite "fit", make a poor score, and immediately lay it to the gun; forgetting entirely that guns don't change, but that men do.

The only reason for changing a gun that was fitted to you is, that you may have grown stouter or thinner; then the gun may be altered to fit the change in you.

You should master the few rules usually posted up in all club-houses, and then you need never think of accidents. I will venture to say that among the 500 thousand trapshooters in this country there does not occur one accident in five years. In fact, there is not as much danger as in baseball, if you will master the few simple rules.

Lastly, but not least, you will find the best bunch of real sportsmen in the trapshooting-game, with fewer exceptions, than in any other game, bar none, in the world. It is not a commercial game, but the trapshooter is always a trapshooter for the *real sport*, and very, very few for any other reason.

Age is no bar. I have known several men well over seventy who could shoot through a two-day tournament around 90 percent.

Try it, doctor; it will keep you physically fit and make a better man of you in every respect.

LE ROY A. NEWTON.

Seattle, Wash.

DOCTOR ABBOTT HONORED

At the last meeting of The American Association of Pharmaceutical Chemists, held in Atlantic City on June 11–13, Dr. W. C. Abbott, president of The Abbott Laboratories and editor-in-chief of this journal, was elected president of that organization—an honor which he greatly appreciates.

This association includes in its membership about sixty of the leading firms engaged in the manufacture of medicinal and chemical preparations for the use of the medical, dental, and veterinary professions. It is doing constructive work of a high order and is undoubtedly one of the most progressive organizations of its kind in the country.

GOOD PRACTICE OPEN IN INDIANA

Owing to the recent death of Dr. Paul Cramer, of Cedar Grove, Indiana, an excellent and well-established practice is open for a good man. In this connection, Mrs. Cramer writes us: "The practice is here, waiting for somebody to take care of it; there is a good stock of medicines, an automobile, a nice residence property, everything complete, and, above all, a goodly com-

munity waiting for a good doctor to locate here."

The late Doctor Cramer was enthusiastic in regard to positive therapeutics and was a warm friend of CLINICAL MEDICINE. Any physician who is willing to hustle and who is prepared to invest in the drugs, instruments, and apparatus that are on hand, should be sure to correspond with Mrs. Gertrude Cramer, Cedar Grove, Indiana.

COURTESY IN CONSULTATION

The following incident from actual life sets a high standard and is worthy of being imitated in other parts of the country.

The doctors of a certain community had been in "factional fights" for years. A young doctor moved into the town. Soon after his arrival, a meeting of the physicians was called, with a view to agreeing upon a scale of charges for services. The older doctors took the lead in the discussion. After the general fees had been agreed upon, the consultation-fee came up for consideration. The leaders contended that this should be placed "high." At this point, the young doctor arose and spoke as follows: "Gentlemen, I have listened to your discussion with great interest. You have agreed upon a fee-list to which I readily consent, except, that I am unwilling to render service at the prices you have fixed. I am willing that it shall stand just as you have arranged it, with the understanding that I shall not charge any 'less,' rather, my charges will exceed your prices in every instance. You, of course, can not object to this." There was a hearty assent.

The young doctor then continued: "Gentlemen, I want to add further, that in the matter of the consultation fee, now under discussion, I disagree with you. I think that this fee should be less than you have indicated. I urge this, because I think that consultations should be encouraged. We can be helpful to each other, while it cultivates a friendly spirit for doctors to meet and discuss the issues involved."

The advice of the "new young doctor" was taken. This was the beginning of a new era among the doctors of that section. "Courtesy in consultation" became the watchword and doctors began to call each other in counsel as never before. Also, the "low-price doctors' " soon adopted the fees charged by the young doctor, and "everything was happy ever afterward," to the extent that the community has been known far and wide as a neighborhood in which the doctors get on well together.

J. W. CRENSHAW.

Cadiz, Ky.

[The young doctor's position required a great deal of courage, and certainly was commendable. Courtesy among colleagues and cordial cooperation make for better work and for greater appreciation on the part of the public.—ED.]

DOMESTIC SANITATION

A correspondent desires information as to how a summer-resort can be made sanitary. Just now, the only publication on that topic, that we recall, is a report of the New York State authorities on the resorts of that state, over 200 in number, not one of which was found free from blame. As to this important problem, three points comprise the essentials, namely, the disposal of sewage, of garbage, and of flies.

At Winnetaska, the growing resort on the shores of Lake Michigan near Muskegon, the Lumsden privy-system has proved satisfactory. In this arrangement, the sewage is received into a barrel—the liquefying-tank—and the overflow, in a liquid form, goes into another receptacle, and from this it is removed as occasion demands and deposited where it can do no harm. Thus, the soil is protected from contamination and through it the water. Every part of the apparatus is protected from the access of flies and mosquitoes.

Garbage is disposed of by a system originating at that place. With a post-hole digger, a hole is made in the ground, and into this all garbage and wash- and dish-water is poured. Over this hole a large fly-trap is placed. The flies make good chicken-feed. When this hole is nearly full, it is filled up with earth, then another hole is provided—and so on. The effect on the fly-nuisance is quite perceptible.

Is there anything more to domestic sanitation?

WHAT IS ETHICAL?

Herewith my renewal to what I believe to be the best, most scientifically practical medical periodical of today. I favor ethical literature in its broadest sense, and have yet to find a single objectionable feature either in THE CLINIC'S advertisements or its text. Imputations to the contrary originate in the

same old well-known source, and they only serve to exploit a lamentable fact – that we shall forever be encumbered with a small element of men who otherwise are good, but, upon this ancient hobby, are like the Indian's mountain, "so straight up it leans over a little."

One of the oldest teachers in McGill University once said that "a regular bonafide doctor would not hesitate to adopt or use any reasonable means or method that would relieve or cure the sick." His statement would produce hysterical spasm in some of our keenest sticklers for ethics.

Let the big, broad facts roll out and roll over such opinions is the wish of, Yours fraternally,

LOUIS W. SPRADLING.

Athens, Tenn.

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[It all depends upon what we conceive to be "ethical". We believe that it is not so much the literal, blind adherence to any set laws or regulations, no matter whence they emanate; but, that it is comprised in the steadfast following of the golden rule. For, this includes the employment of the best possible means for aiding the sick; it means a large tolerance and broadmindedness toward our fellows, but a strict obedience, on our own part, of what we know to be right. It means —oh! it means a lot of things that each one must work out for himself.—ED.]

SODIUM CACODYLATE IN MALARIA

Some years ago, a woman that, as I positively knew, could not take quinine even in minute doses, contracted malaria, and I was at a loss to know what to do, as her chills were increasing in severity. At last, I decided to try sodium cacodylate. I gave her, hypodermically, the contents of a 2-grain ampule soon after a chill. The next day at about the same time, I injected a 3-4-grain ampuleful. This I continued until she had received daily for eleven days the contents of a 3-4-grain ampule. The chill due the second day after the first injection of 2 grains did not occur, and she had no more chills or headache.

The next malaria-patient coming to me could take quinine, but the effects of the cacodylate had been so much more pleasant in the other case that I used it in this one, injecting 2 grains every other day. I have now treated altogether 4 cases, and only one patient had a chill after the first injection, and then only that one chill. I told many of my friends about it, and they have tried the cacodylate with equal success.

The next year, when malaria again made its appearance in surrounding regions (not in our locality, however), I was urged to publish my experiences with this treatment, and started to do so. However, before I had mailed in my article, I saw the one from our southern friends also recommending this use of sodium cacodylate, so, let the matter drop.

I should never willingly use quinine again to *cure* malaria. I should cure the infection with the cacodylate, but, give the quinine (to those who can take it), in doses of not over 2 grains three times a day, for its tonic effect.

Kindly omit my name, but, if any physician fails to stop the chills of malaria instanter with this injection, if he will write you, I hope you will give him my name and I shall gladly hear from him.

G.

——, Illinois.

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[This letter was written by a prominent physician in one of the largest cities in central Illinois. He desires that his name be not published. There is accumulating testimony to the value of sodium cacodylate in the treatment of malaria. We hope that other physicians may be tempted to give the remedy a trial and give us an account of their experience.—ED.]

LYDSTON: "DISEASES OF THE PROSTATE GLAND

It gives us great pleasure to inform the readers of CLINICAL MEDICINE that Dr. G. Frank Lydston has in preparation a new book on "Diseases of the Prostate Gland." This book, which will be published by The Riverton Press, of Chicago, is sure to prove one of the most practical and helpful of its kind. Doctor Lydston is an authority on prostatic diseases. Few men have had wider experience or treated conditions of this character with better success. We are confident that the book will have a large sale.

THE INTERNAL SECRETIONS IN PRACTICAL MEDICINE

For several years, our old friend Dr. Henry R. Harrower has been securing data for a book which is to carry the above title. Doctor Harrower is well known to reading physicians for his extensive and intensive studies in the absorbing subject of the internal secretions, and he probably has a

better understanding of the many problems associated with it than have most other investigators in this country; this, without any wish to detract in the least from the great merits of Doctor Sajous, who virtually laid the foundation for this work, and who for many years was almost alone in his insistence upon the importance of the endocrine secretions.

Doctor Harrower has been urged to hasten the publication of his contemplated book, but, very naturally, he hesitates to do so under the prevailing conditions. For this reason, he would appreciate communications from physicians who are interested in the matter and who would contemplate buying this book, the advance price of which is set at $2.00, while the regular selling-price after publication would be $2.50.

We suggest that the readers of CLINICAL MEDICINE communicate with Doctor Harrower at Glendale, California, indicating their intention to subscribe for this contemplated book, a copy of which will be sent to any physician so inquiring on approval immediately upon its publication.

We do not doubt in the least that this forthcoming book will be of as great interest as, if not even of greater practical value than, Doctor Harrower's earlier volume, entitled "Practical Hormone Therapy," which was reviewed in this journal some time ago.

UNITED STATES ARMY AMBULANCE CORPS

How many readers of CLINICAL MEDICINE know that an entirely new corps of the United States Army has been created, known as the Army Ambulance Corps? It is the writer's belief that very few of you knew about it. The editor confesses that he did not, until the fact was brought vividly to his attention by the appointment of his old friend, Dr. Richard Slee, to an important position in this cantonment.

This corps, thus far, has been recruited mainly from the young men of our colleges—the very best of American blood and brains. Twenty-five hundred of these men are already on duty at Allentown, Pa., where this cantonment has been established. This number will be increased to five thousand. It is probable that a force of this size will be constantly in this camp until the end of the war.

The commandant is Major Elvert E. Persons, of the regular army. The following officers have also been assigned to duty with this corps in Allentown: Majors Percy L. Jones, Arthur W. Yale, Richard Slee; Captains Clarence P. Franklin, Jason C. Byers, J. Ryan Devereux, Ward Brinton; First Lieutenants Chas. D. Lockwood, George H. Clapp, Shaler Berry, Walter J. Whitehouse, Carlton D. Haas, Rufus H. Van Vost, Rossner E. Graham, Thos. D. Hurley, Alex E. Listoe, David E. Smith, Max R. Stockton, George S. Woodard, Marion H. Wyman and Chas. H. Berle.

The young man who goes on duty with the Ambulance Corps is sure to be kept pretty busy. Fond mothers who imagine that their sons will be in all sorts of mischief as soon as they get into the army should be relieved when they learn that "son" has to be out of bed at 5:15 a. m. and is on constant duty until 9:30 p. m. Just glance at the following order of "Calls":

First Call		5:15 a. m.
Reveille		5:30
Assembly		5:45
Drill		5:55
Recall from Drill		6:10
Mess—1st		6:30
Mess—2nd		7:15
Fatigue—Old Guard		8:00
Drill		8:00
Recall from Drill		9:00
First Sergeant's Call		9:15
Guard Mount		9:30
Recall from Fatigue		11:30
1st Mess		12:00
2nd Mess		12:45 p. m.
Fatigue—Old Guard		1:30
Drill		1:30
Recall from Drill		2:30
Recall Fatigue		4:00
Sick Call		4:30
Retreat	1st Call	5:00
	Assembly	5:15
	Retreat	5:30
Mess—1st		5:45
Mess—2nd		6:30
Tatoo		9:30
Taps		11:00 p. m.

What is to become of these young men? As fast as possible they will be sent to France (in fact, one detachment has already been sent), where they will be actively on duty on the battlefield. Some of them run ambulances, others will become stretcher-bearers, and still others detailed to the order of duty about dressing stations and hospitals, but all will be actively engaged in work that will be perilous and exciting enough to stir any young American with red blood in his veins.

Time was when the hospital service man was looked upon as a military "pacifist." His job was thought to be suited to religious "cranks," who could not bring themselves to the point of shedding blood and therefore sought positions well in the rear, where they

would be safe from gun-fire. Not so, today. The ambulance corps man risks his life perhaps more frequently than any other soldier, except, possibly, those engaged in the aviation service.

ARMY ADVANCEMENT FOR DOCTOR SLEE

As many of the readers of CLINICAL MEDICINE know, Dr. Richard Slee, one of the members of our editorial staff, in addition to his duties in connection with The Slee Laboratories, has been doing valuable service to the country as a first lieutenant in the Medical Reserve Corps.

Several years ago, on the occasion of the fiftieth anniversary of the battle of Gettysburg, he was in charge of one division of the sanitary supervision of the great camp of old soldiers. His splendid work at that time has at last received the recognition it deserves. Doctor Slee has been advanced in rank and is now Major Slee. At present he is on active duty at the concentration camp of the United States Army Ambulance Corps, located at Allentown, Pa. At this camp he is sanitary officer, post-exchange officer and police officer. He is in full charge of the sanitation of the entire camp.

Inasmuch as twenty-five hundred young men are now on duty in this corps at Allentown and five thousand are ultimately to be stationed there, the duties of this position are by no means light.

I am sure that every member of CLINICAL MEDICINE will join with us in congratulating Major Slee upon this well-deserved promotion.

A LETTER FROM A CONVICT

Our letter-writing privileges are limited to two letters a month—and this letter is one of those that are allowed. Now, I am going to take advantage of the opportunity you have afforded us to get acquainted and shall consider it quite a pleasure if I may write to you once in a while.

Face value! It seems that there are darned few men who are willing to accept others on this valuation. Writing to a man in prison—an outcast? Anathema to some people? But, you know from your correspondence with Eytinge that there are real men in prison—men with red blood in their veins—hustlers, yes, sir, constructionists. I'm only a kid, but, I'm trying to do my "bit" and trying to help others. Twenty-six years old, and eight of these years spent in prison.

Seven years ago—almost to the day—after having spent a year in jail awaiting trial, I was sentenced to prison—for life. A physical and mental wreck, and at that time a menace to society, there was no other alternative than that I should be isolated from society; so, in justice to society and to myself, I was placed where I could do no harm. At the age of eighteen, mentally unbalanced as a result of my habits of self-indulgence and the use of drugs, and for no reason whatever, I took the life of the girl who was my dearest friend! It hurts to write of it—even to think of it.

Oh, it is a long story in the telling—like so many others. Headaches. Search for relief. Socalled remedies, all well advertised at that time (but, friend Wiley at Washington has given some of them a black eye since!). Soon I became an habitual user of these drugs—then—chaos! awakening! realization of some overshadowing disaster—but no conscious recollection of just what I had done. A year's phantasmagoria in jail, every nerve and muscle quivering for their accustomed poisons; twelve days of agony in a crowded courtroom, sentence imposed, the journey to prison—and the doors closed, shutting me in for the rest of my days!

It is seven years since then, the seven best years of my life. But, what of those years? A new man made from the pieces left in the wreck—a new mind to think with, to reason with. New ideals—yes, formed in prison. I am more proud of the seven years spent in prison, fighting the fight, than of any good I may have done in the eighteen before. For, I think I have filled an empty shell with backbone and—well, viscera!

Work! The greatest gift in the world. Work! Work! To keep busy. Study—study of self. And today I think I am better acquainted with myself than ever before and know my capabilities and my limitations. I once heard the remark that "a man in prison has to behave". Not a bit of it! A man in prison can be just as mean, just as lazy, just as "ornery" as any "critter" outside; and some are, and get away with it. But, prisons are full of men honestly struggling to mend the rents in their moral garments, and many a man leaves a prison, wearing a spotless robe.

My work has been the means of obtaining a little money to buy books and instruments with which to carry on my studies—for instance, my share in your valued order

enabled me to purchase a slide-rule, an instrument I had wanted for years. My next investment will be made in a set of Civil Engineering Encyclopedias, to add to my little library of engineering books—for, civil engineering is the profession I intend to enter. Already I have had many opportunities to apply the knowledge I have gained by constant study. In 1911, I installed a new telephone-system in the prison; in 1912, a survey of the prison property and a 48x60-foot plot of the grounds and buildings; in 1913, I drew the plans of a proposed centralized power-plant—an efficiency-idea. In 1914, my work consisted in the designing of a new concrete entrance arch on the prison grounds and a garage accommodating two cars for the warden. The next year's results were a set of plans for a new hospital (proposed), while this year includes the installation of a cold-storage plant; all this work in addition to my general studies and my duties as prisoner-electrician. I, sure, have kept busy, and it's been worth while.

The pardon committee on the governor's council voted to give me another show and to open the doors of promise to me. Like the chap whose letter you sent me, I, too, hate to see a man whine and cajole and wiggle his way out without working. And, like friend Eytinge, I know what it is to wait, and wait for the day to come. There is another world of opportunity for both of us beyond the walls —a world in which he already has made a mark and in which I hope to make mine. Eytinge, I wish you luck, old man.

James B. Harmon.

State Prison, Charlestown, Mass.

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[We sometimes wonder how often, in the busy rounds of life, it occurs to us to inquire diligently and with real, actual interest, how "the other half" lives, or, the other fourth, tenth, hundreth? We sometimes read newspaper accounts of the doings of the idle rich—from close association with whom a kind fate has mercifully preserved us ("sour grapes is nix, Mawruss!"); reports and begging letters from charity organizations, relating conditions existing among the "submerged," come to our desk, as they come to yours, and we confess to a slightly academic interest, not untinged with impatience, when we think of the all too many charity patients that we ourselves have been called upon to treat, when—God knows—we needed the fees for our services as much as the patients needed the services. Occasionally our attention is arrested, in passing, by some reference to work among another contingent of "submerged" ones, when we read or hear of uplift work in prisons, of the faithful labors of Mrs. Ballington Booth and of many others, and of some man or woman, here or there, who has come back after having been a convict.

Such reminders, that there are other people and that they live and think and strive and have ideals and failings, even as you and I, are calculated to arouse, not only our interest, but sympathy. Readers of Clinical Medicine will remember articles and letters from Mr. Eytinge, in 1912 (May) and in 1916 (June), which show that even behind prison bars life may hold rich stores of interest and that even a life-sentence does not need to "shelve" the victim of society's punitive displeasure. Partly through Eytinge's writings, partly through other occasions, a member of our staff has been in correspondence with an inmate of the state prison at Charlestown, Massachusetts, and we believe confidently that the extracts from his letter printed above will prove of interest to our readers. Physicians have large stores of sympathy and forbearance; our calling makes us patient with, and interested in, "those others". What does Mr. Harmon's letter mean to you?—Ed.]

MORPHINE-ADDICTION, AND ITS CURE

The difficulty of obtaining opium and its congeners has made the continuance of the habit a serious problem with many addicts, and its withdrawal no doubt is resulting in the death of many thousands of impecunious sufferers unable to take treatment. Hence, the question of the most absolute and perfect cure, with the least unpleasant symptoms to the sufferer.

I have a personal experience to relate here that must be of much interest to anyone who is seeking relief from the galling chains of this bitter bondage from which he is powerless to free himself:

For twenty-five years, I have been a sufferer from asthma and, as usually happens, I became addicted to the use of morphine. In the six years during which I took it, I increased the dose to only 3 grains in the twenty-four hours, learning early that all I could get out of it was, the control of the seizure of the asthma and the withdrawal-symptoms and the knowledge that the constant increase of the dosage is worse than useless.

Finding that soon it was going to be impossible to obtain the drug, I resolved to get

rid of the habit. Then the "how?" was the next thought. A nearby sanitarium being recommended to me, I went there, with the following results:

The first night, I was given two compound cathartic pills and on the second night three of them, which acted freely. The second day, I was given a dose of luminal [phenylethylbarbituric acid], and in ten minutes, as I remember saying, I was sleepy, and would go to bed. Whether I ever got into bed alone, I do not know; however, six days later, I waked up and found myself in bed. Best of all, I woke up to the realization that I was free from the morphine-habit. I have never wished a dose since then, nor have I had any, and it now has been seventy-five days since I was cured. And, best of all, everything points to my recovery being permanent.

The owner and physician in attendance at the sanitarium, Dr. H. E. Goetz, at Knoxville, Tennessee, was kind and ethical enough to write out the whole history and details of this treatment which I proceed to give in his own words:

"I began with a series of rational experiments in 1912. Having first visited the medical centers in search of information leading up to the treatment of these unfortunate patients and having tried out the treatments as recommended, using belladonna, hyoscine, and other allied drugs; also substituting dionin and other opium products and meeting only with failure, I concluded that a powerful hypnotic not producing delirium would solve the problem, in connection with methods of eliminating the opiate from the system. I was led to believe that phenylethylbarbituric acid (or luminal, as is the trade-name given by Merck) would prove to be the drug sought for.

"My attention first was directed to this drug through some of my German connections. It had been tried out on animals and later on men. It was found to possess a strong somnifacient action, in that it produces sleep from a light nap to the most profound slumber. However, my experiments in this direction were not original with me, but only confirmed the experiences of others.

"The first patient on whom I tried the luminal as an antagonistic to morphine was a woman and the amount of the drug given was greatly in excess of what is necessary to produce the desired effect. This patient slept more or less for seventeen (?) days, being, of necessity, artificially fed and otherwise cared for during that time. She recovered fully and since then has married and borne several children.

"Encouraged by this experience, and meantime having learned, happily, the lesson as to dosage, I proceeded along more rational lines. Having observed that morphine is not eliminated from the system in less than six or eight weeks, by the socalled gradual-reduction method, while in cases where other methods were used, such as the use of belladonna and hyoscine, in from three days to three weeks, the question of elimination of necessity was given much attention, the urine and feces of each patient being examined on the seventh and the fourteenth day of the treatment, to ascertain the condition. In most cases under this treatment, the seventh day no longer would disclose any morphine in the excretions, while in not more than one in a hundred cases does opium remain in the secretions by the fourteenth day.

"The analgesic action of the luminal completely destroys leg pains and other sufferings complained of by the patient, such as 'boring pains' in the bones and cramping of the muscles. The sleeplessness and delirium under atropine-treatment is completely absent. In fact, some able authorities have likened the Goetz treatment to 'twilight sleep,' in that the patient sleeps through the distressing period and awakens finding the habit gone and himself free from pain. Moreover, this is by far the safest treatment, as no death has been recorded under its use. The aged and those suffering from painful chronic diseases who heretofore have been unable to take treatment, can take this treatment with safety. Asthmatics and others having respiratory or cardiac disturbances and who heretofore have feared the customary treatments may be given this treatment with impunity."

Feeling that Doctor Goetz had not been explicit enough I wrote, requesting more express information, and was favored with the following reply.

"Every case is a law unto itself. The physician must be the judge as to dosage of any remedy, and so it is with luminal. In the first few days, we give about 1 grain in every two hours, or, about 12 grains a day. Thus we test out the patient's tolerance for the drug. This would be safe in any case, and one can always increase the dosage to meet the symptoms of morphine-withdrawal as they arise.

First, of course, eliminate thoroughly, giving sufficient compound cathartic pills and 5 grains of calomel; also, magnesium sul-

phate, in 1- or 2-ounce doses, every morning for six to fourteen mornings, according to the progress made. In most of the cases, we withdraw the morphine during the first three days, and the patient experiences no discomfort if the luminal is given with judgment, that is, pushed enough to control the craving and the leg pains."

My own experience with this treatment has been pleasant, and today I am well and happy, weighing more than I ever did in my long life of 63 years. The only wrong thing about it is, the "high cost of living," for, I have been hungry every day since, eating three times a day and besides between meals and sometimes at midnight. This may read "lively" to you, but, it is the truth, every word, and, if I had a hundred cases of morphine-addiction, I should unhesitatingly recommend this treatment.

To awake in a few days free from a slavery, worse than death, and feeling perfectly well, having escaped every withdrawal-symptom so well known to the victims and never more to desire the drug, is something to rejoice over.

Any competent physician can use luminal for curing these sufferers. I feel for many of them who can not take treatment on account of poverty and must die; many of them already have died. There is a grave responsibility resting somewhere, on account of the grave circumstances surrounding these unhappy people.

M. G. Price.

Mosheim, Tenn.

NEXT MONTH A WAR SECTION IN CLINICAL MEDICINE

Beginning with the next number of Clinical Medicine, we shall devote several pages in each issue to information relative to the medical aspects of the great war. We urge every reader of this journal to send us news items which they think will be of interest in this portion of the journal. Also, we want personal experiences from men actually on duty. Help us to make this section of the journal just as vitally interesting and just as helpful as every other part of the Clinic.

Don't forget to send us pictures if you have, or can get, any, which may be of interest.

SURGEONS ARE NEEDED IN THE ARMY

Doctor, please consider this a personal appeal. *You* are needed in the army. We may say, with authority, that the government in Washington is greatly disappointed at the slowness at which enlistments are coming in for the medical branch of the service. There is an urgent need for probably 20,000 to 30,000 medical officers. At the present time there are only about 500 surgeons in the regular army, 800 in the National Guard, and about 2000 accepted for the Medical Reserve Corps. While only good men are wanted, it is safe to say that the examinations will not be such that any well qualified and physically sound man need anticipate great difficulty in meeting the requirements.

The qualifications are as follows, for the Medical Reserve Corps: The applicant must be a citizen of the United States and between 22 and 55 years of age; he must be a graduate of a reputable school of medicine, and must be engaged in the active practice of his profession. Specialists are desired as well as general practitioners.

We are printing on the following pages a copy of the blank which the applicant must fill out. To save time, use this blank. We suggest making personal application to the examining board nearest you. If in doubt, communicate with the secretary of your state medical society, or with the surgeon general at Washington.

The data required may be epitomized as follows:

1. Personal application directed to the Surgeon General, expressing your desire for commission in the Medical Officers Reserve Corps.
2. History sheet filled out and sworn to before a Notary Public, on back of sheet, where the signature occurs.
3. Proof of citizenship if foreign born.
4. Certificate of license to practice.
5. Two letters of recommendation, one preferably from a physician, the other may be from a layman.

If you are a young man, consider the possibilities of the regular army as a permanent career. To enter this branch of the service the age limits are 22 and 34, and in addition to the qualifications already described the applicant must have had at least one year of practical hospital training. The qualifying examinations are more severe than for the Reserve Corps. The medical service of the army offers great posibilities to ambitious young physicians.

We hope that many of the readers of this journal will respond to the appeal of our country for help. Will not those who do so, send us their names?

PERSONAL HISTORY OF APPLICANT FOR APPOINTMENT IN THE MEDICAL RESERVE CORPS, UNITED STATES ARMY

Give your name *in full* (including your full middle name):

The date of your birth: The place of your birth:

When and where were you naturalized (if of alien birth)?

Are you married or single? Have you any children; if so, how many?

What is your height, in inches? Your weight, in pounds?

Give the nature and dates of all serious sicknesses and injuries which you have suffered.

Do you labor under any mental or physical infirmity which could interfere with the efficient discharge by you of the duties of a medical officer?

If either parent, or brother, or sister has died, state cause and age in each case:

Do you use intoxicating liquors or narcotics; if so, to what extent?

Have you found your health or habits to interfere with your success in civil life?

What academy, high school, college, or university have you attended? State periods of attendance from year to year, and whether you were graduated, giving date or dates of graduation:

Name any other educational advantage you have had, such as private tuition, foreign travel, etc.:

Give all literary or scientific degrees you have taken, if any, names of institutions granting them, and dates:

With what ancient or modern languages or branches of science are you acquainted?

When did you begin the study of medicine, and under whose direction? His residence?

How many courses of lectures have you attended? Names of colleges and dates.

When and where were you graduated in medicine?

Have you been before a State Examining Board? If so, state when, where, and with what result:

Have you had service in a hospital? If so, state where and in what capacity, giving inclusive dates of each kind of service:

What clinical experience have you had in dispensary or private practice?

Have you paid particular attention to any specialty in medicine; if so, what branch?

What opportunities for instruction or practice in operative surgery have you had?

Have you previously been an applicant for entry into the United States service? If so, state when, where and with what result:

Are you a member of the organized militia? If so, state with what organization and in what capacity.

Have you been in the military or naval service of the United States? If so, give inclusive dates of service with each organization, designating it:

In case of war or threatened war, will you accept active service for duty with the Army, should your services be needed?

What occupation, if any, have you followed other than that of student or practitioner?

Present or temporary address:†

Permanent residence:†

I CERTIFY that to the best of my knowledge and belief the above statements are true.

Signature: ☞

Date, ... , *191*

Subscribed and sworn to before me, this . . . . . day of . . . . . A. D. 191

[SEAL]

. . . . . .

[Signature and official title.]

†The candidate should give his present address for correspondence, and also his permanent address to which he desires commission sent should he be appointed.

FORM 149.
W. D., S. G. O.
(Revised March 6, 1912.)

Am. Jour. Clin. Med.
July, 1917

, *M. D.*,

OF

, *191*

FURNISHES PERSONAL HISTORY

IN CONNECTION WITH

APPLICATION FOR APPOINTMENT

IN THE

MEDICAL RESERVE CORPS,
U. S. ARMY

. . . . . *Inclosures*

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

[*Continued from June issue, page 465*]

EGESTION and Ingestion: The superior importance of the functions of egestion over those of ingestion was pointed out by Marshall Hall in 1842. When the system fails to rid itself of its own carbonic acid, it is soon poisoned. The excreta of the urine are powerful nerve-poisons, a retention of which causes coma and convulsions; while bile, in large quantities, is equally injurious. In fact, it seems that the assimilation of all foods is attended or followed by the production of principles of an extraordinarily destructive character, either as injurious products of the food, when split up within, or as waste matter, the result of histolysis. The questions concerned with retrograde metamorphosis are serious, especially with reference to nitrogenized principles, whose matters do not merely go toward tissue building and then, through a process of oxidation, change from one form of histolytic product to another; they do not break up, in tissue destruction, into creatin, creatinin, tyrosin, and other early products of tissue decay and then pass on into urea and uric acid merely. In all these forms they are, in large amounts, dangerous poisons; and they also become ferments within the organism the deleterious functions of which must be taken into consideration by the physician.

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Digestive Principles: Pepsin, a very strong ferment in the production of the digestion of albuminous matter, is a secretion, and, therefore, an excretion of the stomach by means of the follicles. Pancreatin, another albuminous ferment, is formed in the pancreas and has notable power as a digestive agent. Ptyalin, useful for converting starch into sugar, is the ferment of saliva. These valuable ferments are excrementitious to the extent in which they are cast out of a part of the organism, while at the same time they promote digestion by their action on the food material.

An animal principle closely resembling albumin is contained in all the gastric, pancreatic, and salivary fluids, a principle which appears to be in a constant state of change or incipient decomposition; and it may be that, while this very condition makes the albuminous matter important as a promoter of aliment solution, it also renders it unfit to be retained within the circulation.

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Our body-heat itself is due to the lactic acid of the lactate of sodium; and this in turn is caused, by the glycogen stored up in our livers and there converted into sugar, to be broken up by lactic acid, which, uniting with the sodium of the blood, is slowly oxidized. The production of too much waste matter, by the overactivity of these ferments, is a phenomenon just beginning to attract the serious attention of the profession, and there is every reason to believe that much good may come from a study of it.

There are generated along the gastro-intestinal canal various excrementitious albuminous products, and these are very helpful to food elaboration. Primarily divergent from each other, in themselves they possess considerable action in common. In other words, the primitive tegument along the digestive tract has gone through such changes that it now excretes or secretes various products which assist the process of assimilation, while it gives out other products which, when the system is charged with them, are too far advanced to have any nutritive force, being, in fact, active poisons.

As is well known, the intestine, in addition to its other functions, eliminates a number of substances from the body-fluids—such as iron, phosphorus, calcium, and so on—in the form of organic salts. It also secretes, in less measure, nitrogenous and fatty or fat-like substances.

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Intestinal autointoxication as the cause of disease was promulgated as a doctrine by Bouchard and his school. It is a familiar fact that the intestine is the sole internal organ in which, from the day of birth onward, bacterial decomposition occurs continuously without necessarily injuring the body. In-

deed, bacterial action is necessary for the proper functioning of the intestine. The chemical processes in the decomposition of the chyme consist in fermentation of the carbohydrates, putrefaction of the protein, and conversion of the fats into the lower fatty acids. Of all these, the last-mentioned is of least importance.

It is in the colon as well as in the lower part of the small intestine that fermentation of carbohydrates occurs normally. On the other hand, putrefaction of protein takes place only in the large intestine. A rigid line of demarcation is formed by the ileocecal valve, above which putrefaction never sets in, except under pathologic conditions. In the cecum and ascending colon, the two seats of most active decomposition, both putrefaction and fermentation come together; the latter afterward predominates over the former, to decrease again in the last portion of the colon, where the feces become inspissated. It follows that the fecal bacteria, which flourish abundantly in the cecum, gradually decrease in numbers farther down.

The products of fermentation are: gases, volatile fatty acids, and lactic acid, and for the most part these are absorbed by the intestinal wall. The gases become again excreted with the air expired by the lungs in breathing. The fatty acids either are expired or eliminated unchanged in the urine or become oxidized. Those products of fermentation that do not become absorbed are excreted, either as flatus or along with the feces. Putrefaction of protein produces ammonia, sulphureted hydrogen, and other gases; as also several characteristic bodies, such as aromatic oxy-acids, phenol, indol, and skatol. These latter also are absorbed by the intestinal wall, while the gases are removed with the exhaled air. The other substances either remain, to a variable extent, in the feces or are excreted in the urine as compounds of sulphuric or glycuronic acid.

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Results of Autointoxication: As a cause of extreme wasting of infants in diarrhea and vomiting, Kellar has suggested acid intoxication from the intestines.

Diarrhea is sometimes associated with an increase of intestinal decomposition. Hanot and Bouchard looked upon the enlargement of the liver, which frequently accompanies chronic dyspepsia, as a result of intestinal intoxication, founding their theory on animal-experiments by Boix, who asserts that he produced cirrhosis of the liver by giving, for a prolonged time, food containing acetic acid and butyric acid.

Chlorosis and certain forms of pernicious anemia are, most closely of all the blood diseases, related to decomposition of the intestines, and I believe that many cases of arthritis deformans are similarly related. It is well known that chlorosis is often accompanied by a tendency to constipation, and this symptom—or rather the hypothetical decomposition-process which attends it is, according to many authors—the fundamental cause of the disease.

We must also admit the clinical coincidence of gastrointestinal wrongs with skin eruptions.

The nervous system displays most of the highly varied symptoms which clearly result from intestinal decomposition. At one end of the chain, is simple headache, and at the other there are coma, convulsions, and collapse. The most common forms may be considered under these headings.

First, the general phenomena, common to severe constipation; second, tetany; third, epilepsy or eclampsia; fourth, psychoses.

Included in the general phenomena observed in severe constipation are: the nervous symptoms which accompany chronic or habitual constipation—an out-of-sorts feeling, headache, lassitude, neuralgia, giddiness, ill-humor, and so forth. Tetany is due, doubtless, to decomposition in the stomach. Epilepsy and eclampsia, having sometimes been associated with marked acetonuria, are, by von Jaksch and Lorenz and others ascribed to intestinal autointoxication. As for psychoses, there has been much discussion lately, especially in France, anent the connection between it and intestinal decomposition, and out of this has sprung the generally accepted doctrine of "visceral psychoses."

One way of conquering intestinal autointoxication is, to overcome constipation.

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No one, nowadays, who could possibly afford them, would think of doing without the services of a trained professional nurse in a case of acute illness. Certainly, no physician would do without her assistance if he could possibly obtain it. Both the doctor and the family know the great value of trained, intelligent, methodical ministration in the care of the patient. It is not simply the desire to unload the burden and responsibility of nursing onto someone else's shoulders that puts the trained nurse into such general requisition on such occasions—any obliging neighbor would answer that

purpose just as well. It is that, in the person and office of the professional nurse, we recognize all that is most efficient in the *executive* aspect of treatment. Under her trained and efficient hand, we know that all the administrative phases of the treatment designed by the physician will be carried out with system, regularity and despatch; and, so, the patient will get the full benefit of that treatment.

With a trained nurse on duty, the sickroom takes on as nearly as possible the character of a hospital, of which institution she is the product, where the regimen of care and treatment is administered with the maximum of order and precision. She brings this spirit and method into the house. The care of the patient and the performance of the doctor's orders are, in the hands of one who makes a business of it, fully watched and recorded and reported; medicine will be given promptly on time; all the necessary offices for the sick will be performed promptly, skillfully, unobtrusively; emergencies will be foreseen and forestalled; and the entire environment of the patient adjusted and maintained to the best advantage.

Thus, our recognition of the value of the trained nurse is in reality a tribute paid to the value of institutional care of the sick. Many physicians, and many lay people, too, go to the logical limit preferring to treat all their acute cases in the hospital itself. The great majority of physicians would doubtless prefer, everything else being equal, to have all their serious cases there. In certain classes of cases—especially of a surgical nature—hospital care is insisted upon. And, no doubt, everything else being equal, hospital care and treatment would be the ideal state of affairs in all serious cases. But, very frequently, in acute diseases, there are other important considerations to be taken into account which make it undesirable, if not impracticable, for the patient to go to the hospital—of which the most obvious and all-sufficient consideration often is, that there is no hospital available. And, so, we have to do the next best thing, and bring the spirit and method of the hospital to the house in the person of the trained nurse.

With chronic diseases the importance of the phase of treatment is not, as a rule, so apparent or so universally appreciated. It is, nevertheless, no less valid. Indeed, in certain respects, it would seem to be even more desirable in chronic than in acute cases. For, in acute cases, even when the institutional system is not actually represented, either by the hospital itself, or by the presence and work of a trained nurse, the very imminence and urgency of the occasion creates in the minds of both the doctor and the attendants a compelling sense of the necessity for enforcing institutional methods. But, in chronic ailments, there is no such compelling influence, and, so, these features are slighted and neglected. And, furthermore, in the case of chronic disorders there is always a psychological element to which nothing but institutional environment and care can minister, which is not usually present in the subjects of acute disease.

The application of this principle is, of course, a little different in chronic maladies to that which prevails in regard to acute diseases; and, the difference is almost all in favor of the former. It is practically essential, for instance, that institutional treatment in chronic disorders, if it is to be of value at all, shall be absolute; that is to say, that the patient shall betake himself to the institution. And this, happily, he is generally able to do, since his complaint is not so disabling as to prevent his removing himself. It is not only unnecessary that the institution should be near at hand, as it is for acute cases, but it is positively advantageous that it should not be, since it is a vital part of the benefit of such treatment that the patient be taken away from his relatives and friends, and completely removed from his old surroundings. Nor is it essential or desirable that he should receive the undivided attention of a special attendant—unless in exceptional cases of helplessness—because it is usually a part of the object of institutional treatment to divert the patient's mind from his trouble and promote self-reliance.

The principles of institutional treatment are, however, fundamentally the same in chronic as in acute cases, and may be summed up under three heads; namely, (1) adequate equipment and facilities for administering treatment; (2) systematic and intelligent supervision, and (3) psychic influence of environment and regimen.

[*To be continued.*]

Among the Books

KREHL-BEIFELD: "PRINCIPLES OF CLINICAL PATHOLOGY"

The Basis of Symptoms: The Principles of Clinical Pathology. By Ludolph Krehl, M. D. Authorized translation, from the 7th German Edition, by A. F. Beifeld, M. D. With an Introduction by A. W. Hewlett, M. D. Third American Edition. Philadelphia and London: The J. B. Lippincott Company. 1916. Price $5.00.

The point of view of the pathologist, which explained diseases according to what he found at necropsy, which view held sway during the greater portion of the last century, has given place to a wider outlook, one that takes into consideration the functional disturbances as they are caused and observed during life, in consequence of anatomical changes, and which recognizes that functional alterations may also be present without evidences of alterations of structure. After all, the symptoms for which a patient seeks relief are all a consequence of changes in function. Even when the physician can not remove the anatomic cause of the disease, he may, yet, be able to restore the bodily functions in such a way as to relieve symptoms or other disease-manifestations. And that is what the patient desires.

It had been a novel departure from the beaten path of study and investigation when Professor Krehl developed the new science of pathologic physiology, conscious of the truth that, after all, pathology is simply physiology gone wrong; and, when he wrote a book upon this subject, in which he sought to interpret the various pictures observed in the clinic from the standpoint of disturbed physiology.

This mode of study opened a far more promising outlook for the ultimate relief of symptoms and, at least in some degree, for the final modification or even arrestment of pathological processes than had been possible hitherto, and it is not to be wondered at that his efforts met with cordial response on the part of physicians, as is evident from the fact that his work appeared in eight editions in the original language and that it has been translated into a number of other tongues.

The importance of Doctor Krehl's work lies in the fact that he studies the nature and causes of disturbed functions as they are observed clinically, and correlates them to known physiological processes. The fault of the disturbance may reside in a constitutionally defective organ-correlation which leads to a disturbance of function even under the ordinary conditions of life (endogenous causes) or noxious factors may arise outside the body (exogenous causes).

Accordingly, the twelve chapters of the book are devoted to the study of the circulation; the blood; infection and immunity; respiration; digestion; nutrition and metabolism; disturbances of carbohydrate metabolism, diabetes; metabolism of the purin bodies, gout; constitutional diseases and diatheses; fever; the secretion of urine; and the nervous system.

For the purpose of study, it is unavoidable to dissociate or dismember the various functions, the processes occurring in each sick individual, in order to group them for convenience of classification. In the living person, at the bedside, the physician must correlate the various functional phenomena, both those that are normal and those that are abnormal, in order to determine how a disturbance of the coordinate action of the different organs affects the individual as a whole. The fact that all these functions are investigated on the basis of what is normal and in what manner it may become abnormal, will aid the physician materially in understanding the nature of those disease-symptoms which he observes and, consequently, in devising measures for their relief.

Doctor Krehl's book has been of great service for many years, and it is a cause for congratulation that a new edition has again become available. We recommend a close study of this work to all physicians, certain that they will find much in it to help them to become better physicians.

JOSLIN: "DIABETES MELLITUS"

The Treatment of Diabetes Mellitus: With Observations Upon the Disease Based Upon One Thousand Cases. By Elliott P.

Joslin, M. D. Illustrated. Philadelphia: Lea & Febiger. 1916. Price $4.50.

This book is the result of the personal experiences of the author in 1000 cases of diabetes mellitus treated in the course of eighteen years. The importance of the subject is fully appreciated by all physicians; yet, it is brought home to us with unusual force when we read that, out of the 1000 cases, 400 terminated fatally. However, thanks to the work of Dr. F. M. Allen, of the Rockefeller Institute for Medical Research, and to the introduction of fasting as well as to the emphasis placed upon physical exercise in the treatment of this malady, the mortality rate during the last two years has been much less than formerly; for, the author says that during the year preceding the publication of his book the mortality of his patients was approximately 20 percent less than for the previous year, and that socalled acutely fatal diabetes is disappearing under modern methods.

A method of treatment that is capable of bringing about such a marked improvement in clinical results, surely, commands attention, and it is only natural that, as we are informed, the first edition of Doctor Joslin's book was exhausted in the course of five months, thus rendering necessary a second edition, which now is in press.

Since the care of patients with diabetes mellitus devolves almost wholly upon the general practitioner, it is incumbent upon him to adopt any method that can show such truly excellent results as the Allen treatment. For this reason, readers of CLINICAL MEDICINE will look forward with interest to the publication of the forthcoming edition. For the general practitioner who cares more for tangible and practical information than for theories, the sixth section, that on aids in the practical management of diabetes-cases, will appeal with especial force, since it contains specific and detailed dietetic directions; is, in fact, what the author calls it, a "primer". It is not the intention, of course, to suggest that the other sections are superfluous; far from it. They contain so much that elucidates the many problems of the diabetic, that the physician hardly can forego a careful and continued study of this useful treatise.

BUCHOLZ: "EXERCISE AND MASSAGE"

A Manual of Therapeutic Exercise and Massage: Designed for the Use of Physicians, Students and Masseurs. By C. Hermann Bucholz, M. D. Illustrated with 89 engravings. Philadelphia: Lea & Febiger. 1917. Price $3.25.

"The correct indications for, and applications of, exercise and massage require, not only a thorough knowledge of the anatomy and physiology, but also a good understanding of the underlying pathological conditions. It is this knowledge, together with sound judgment, that makes the competent masseur —the technic is of secondary importance. Similarly, the best surgeon is not necessarily the one who develops the best operative facility, but the one who combines skill with sound judgment. Throughout the book, it has been the foremost intention of the writer to bring out this point as clearly as possible."

In the opinion of the Reviewer, this passage from the preface of the book before us indicates its nature perfectly. If it is added that the author is director of the medico-mechanical and hydrotherapeutic departments of the Massachusetts General Hospital and assistant in physical therapeutics in the Harvard Graduate School of Medicine, it will be apparent that he is eminently fitted to teach this subject, which is not quite as easy and simple as is believed by many physicians.

For centuries past, massage has been of great assistance for the relief of pain, swellings, stiff joints, and many other affections; but, its practice had largely been left to quacks, until it was raised to merited dignity by Peter Henrik Ling, the originator of the Swedish movement cure. It is fortunate that this mode of mechanical treatment has again been established as an important procedure and that good manuals and textbooks on the subject are available.

DESPARD: "MASSAGE FOR BEGINNERS"

Handbook of Massage for Beginners. By L. L. Despard. London: Henry Frowde. 1915. Price $2.00.

This volume of the "Oxford medical publications" was written for the purpose of assisting those many people who now are learning the art of massage, in order to help the wounded soldiers. It does not, however, limit its information to the practical, but contains chapters on the theory of massage and also one on the treatment of injuries resulting from bullet and shrapnel wounds, traumatic neurasthenia, and socalled frostbites.

The author declares, justly, that massage should be practiced only by persons who have received proper instruction, since correct knowledge of anatomy and of the theory

of disease and of massage must be acquired, in order to carry out the practical part of the work intelligently and with success. The present manual will be welcomed by physicians who may use it for the instruction of their "practical" nurses.

NISSEN: "PRACTICAL MASSAGE"

Practical Massage and Corrective Exercises. By Hartvig Nissen. Revised and enlarged edition of the author's "Practical Massage in Twenty Lessons." Philadelphia: The F. A. Davis Company. 1916. Price $1.50 net.

This book, the author says in the preface, embodies what forty years of study and experience, practice, and teaching have taught him, and it offers an excellent guide for the treatment of those irregularities and affections that are amenable to the influence of mechanotherapy.

"PROGRESSIVE MEDICINE"

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, assisted by Leighton F. Appleman. Philadelphia: Lea & Febiger, March and June 1917. Price, per year, $6.00.

Progressive Medicine provides an excellent means of keeping in touch with the progress in medical sciences and is to be recommended strongly to the practitioner. In the March number, we are interested especially in an account of recent researches into the causes of goiter, which bid fair to further this moot problem and to lead to its ultimate solution.

HEMENWAY: "VETERINARY LAW"

Essentials of Veterinary Law. By Henry B. Hemenway, A. M., M. D. Chicago: American Journal of Veterinary Medicine. 1916. Price $3.00.

This is a useful book, the contents, and purpose of which are self-evident, and which affords information of advantage to the physician as well as to the veterinarian.

HILL: "LABORATORY DIAGNOSIS"

A Manual of Practical Laboratory Diagnosis. By Lewis Webb Hill, M. D. With 11 figures and 8 plates, 4 in colors. Boston: W. M. Leonard. 1916. Price $1.50.

Although there are books aplenty on the subject of laboratory-diagnosis, the author deserves the thanks of the practitioner for having prepared a brief and concise manual that contains actually all those methods of examination, and only those, that are practical and that can be carried out by physicians with such apparatus as they are likely to possess or can acquire to advantage.

This little volume, which is of handy pocket-size and the more practical for being interleaved, has been written with the expressed and deliberate intention of weeding out carefully all tests and methods that are not of ordinary clinical application or which require for their performance complicated apparatus and trained technicians, while including all that information that every one engaged in active practice wants.

PRACTICAL MEDICINE SERIES"

The Practical Medicine Series. Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, A. M., M. D. Series 1917, volume i. Edited by Frank Billings, M. S., M. D., assisted by B. O. Raulston, A. B., M. D., volume ii. Edited by Albert J. Ochner, M. D., F. A. C. S., Chicago: The Year Book Publishers.

"The Practical Medicine Series" makes its appearance in the usual prompt manner and with the customary excellent treatment of the literature dealing with the related subjects. General practitioners are offered in this series a convenient means of keeping up their general studies in medicine and surgery at small expense, the 10 annual volumes costing only 10 dollars, while the single volumes are sold at from 1 to 2 dollars each. However, the arrangement of the subject-matter in several volumes enables those interested in special subjects to buy only those parts which they may desire for limited work and study.

COCROFT: "BEAUTY A DUTY"

Beauty a Duty: The Art of Keeping Young. By Susanna Cocroft. Chicago: Rand McNally & Co. Price $2.00.

Miss Cocroft, author of this book, is sufficiently well known all over the country not to require introduction, and physicians who have become conversant with her teachings, either directly or through patients who had applied to her for help, must have arrived at the conclusion that she has studied her subject deeply and carefully, and must have been impressed with the common-sense directions which she imparts to her charges.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6312.—"Theacylon as a Diuretic." A. V., Illinois, having seen a passing reference to theacylon as a diuretic, desires to learn about its nature and employment.

Like diuretin and similar compounds of salicylic acid and xanthin derivatives, theacylon—a late addition to the stock of new remedies—is a combination of salicylic acid and theobromine; with this difference (according to the manufacturer's claim), that it is a condensation-product, instead of a mere salt, that is, a salicylate of the alkaloid. The special virtue for this substance claimed is, that, unlike its numerous progenitors, it passes the stomach, not being split into its constituents until it enters the alkaline intestine.

In doses of 1-2 Gram four to six times a day, this theacylon is reported to have proved an efficient diuretic in cardial and nephritic dropsies, with greatly increased elimination of the solids, after various other standard drugs had failed. Needless to add that at present this compound hardly is obtainable in this country.

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QUERY 6313.—"Tenacious Tenia." C. L. C., Indiana, has two refractory tapeworm problems.

Case 1. A woman of twenty-two and weighing 225 pounds, six months ago, under another physician, passed some 30 feet of tapeworm, but now again is voiding fragments up to one foot in length. She experiences considerable nausea, frontal headache, unrest, and nervousness. She has no excessive appetite, eating but two meals a day. Her color is good. The worm refuses to vacate, despite "everything" tried thus far.

Case 2. A married woman of twenty-eight, weighing 148 pounds, four months pregnant, harbors a tapeworm and presents these features: voracious appetite, pallor, pinched, worried countenance, nausea, occasional excessive vomiting, great irritability, frontal headache, "stomach-cough." Pretty severe treatment, considering woman's condition, has failed to expel the parasite. Suggestions wanted.

The young lady (Case 1) should be easy enough to treat. A combination of 1 dram of oleoresin of male fern, 20 drops of chloroform, 2 drops of croton-oil, and 1 ounce of castor-oil, when administered the first thing in the morning, rarely fails to dislodge the disorderly boarder—head and all, rather than "neck and crop." It is usually desirable to let the patient fast from noon of the preceding day, and it is essential to secure free catharsis within two hours after the tenicide has been taken. It may be necessary to repeat the purgative at the end of that period. Sometimes cathartic action, even when apparently well under way, stops short of the result desired. When this occurs, give a large enema of strong salt-water, at once. This will make results surer in any case.

The stools should be voided into a pail of warm water, so that the worm may float up, the patient sitting with the nates well immersed. She should remain sitting until the action, in completeness, is over, thus avoiding tearing of the parasite and consequent retention of the head, which usually comes last. Look carefully for the head—with a low-power glass, if in doubt.

If the head is retained sufficiently high up, rapid reproduction of the worm will occur; in which case the treatment must be repeated. It must be remembered, though, that tapeworms, especially certain varieties, often are present in groups.

To delicate patients, 1 grain of the amorphous principle of kousso (or brayera), koussein, may be given, on an empty stomach, the dose repeated in two hours, and followed one hour later by a large dose of castor-oil. Or,

a pill containing pelletierine tannate, gr. 1-3; oleoresin of male fern, min. 1; jalapin, gr. 1-6, may be prescribed for patients who can not take, or retain, the tenicide mentioned under Case 1.

We come now to the second patient, the woman four months pregnant. The present writer confesses to some hesitation in advising the use of the first formula recommended, although several of his colleagues have unhesitatingly advocated the remedy. This writer is somewhat afraid that the powerful tenicide might only not remove the tapeworm, but also might set up uterine contractions sufficient to expel the fetus—an eventuality which, naturally, is to be avoided.

For this reason, it will probably be better to try one of the two other preparations recommended, that is, either the koussein or the pelletierine with aspidium, perhaps giving them tentatively and watching for systemic effects from the male fern.

We believe that the worm might be dislodged more readily if this patient were to fast a little longer than customarily is ordered, omitting at least two meals.

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QUERY 6314.—"Neutral Urine; 'Autotoxic Fevers.'" W. S. W., Georgia, writes: "What is the significance of urine with alkaline or neutral reaction, and how do you treat such condition? Now and then I find patients with such urine. Some of these complain of headache and various indefinite aches and pains in different parts of their bodies; some have fever, headache, and abdominal pains and soreness. Also, what is the best general treatment for autotoxic fevers? I have so much of this kind of fever to handle and I should like to learn how successfully to knock out these conditions in short order, as most of my patients have but little money, to pay for many visits."

If the urine is alkaline when voided and ammonia is present, it is reasonable to infer that cystitis exists. On the other hand, if such a reaction is due to the presence of a fixed alkali, the condition may be produced by the ingestion of organic-acid salts, the presence of anemia or the existence of certain neurasthenic or debilitated conditions or prolonged vomiting.

It must be borne in mind that in all herbivora the urine is alkaline, and acid only in carnivora. In a man on a mixed diet, the reaction normally is acid, but such acidity must, to a certain extent, depend upon the character of his food and is due chiefly to the presence of acid sodium phosphate and hippuric acid. The acidity varies at different times of the day; it diminishes soon after meals, but changes in three or four hours, when it may become alkaline. Vegetable acids in the food increase the alkalinity. An excess of meat will invariably increase the acidity; on the other hand, a vegetarian diet practically always results in the production of alkalinity.

Hence, it is quite impossible for us to explain why in so many cases you find the urine of your patients alkaline or neutral. It is probable, however, that their diet is improperly balanced and that there is some disorder of the body-chemistry—the exact nature of which must, of course, be ascertained in each case.

In order to treat such cases intelligently, not only must a full routine examination of the urine be made, but the exact condition of the patient ascertained. Nine times out of ten, in individuals complaining of headaches and of indefinite aches and pains in various parts of their bodies (especially if some temperature is present, together with abdominal pains and distention), thorough elimination (renal, dermal, and intestinal) and the administration of a few doses of sodium salicylate, in alternation with the sulphocarbolates, will prove curative.

In the South, especially among the negroes, there is frequently, as this writer has observed, more or less hepatic congestion, and in certain parts of the country, below the Mason and Dixon line, examination of such patients' blood will reveal the presence of the malarial plasmodium. Therefore, it is excellent practice, unless such procedure is distinctly contraindicated, to give in addition two or three 5-grain doses of quinine. This very line of treatment is, of course, indicated in what you term "autotoxic fevers;" but, it is unnecessary to point out that such nomenclature is extremely unsatisfactory, for the simple reason that a rise of temperature may be the primary symptom in various forms of autotoxemia or the autotoxemia ultimately may result as a secondary consequence of the disease-process causing the hyperpyrexia.

You certainly should secure thorough elimination, by the administration of calomel, gr. 1-6; podophyllin, gr. 1-6; and bilein, gr. 1-12; half-hourly for four to six doses, followed by a laxative saline in three hours, at night, and the next morning. It is quite possible, however, that sodium phosphate will give you better results than magnesium

sulphate with lithia, especially where you have an alkaline or neutral urine.

In all such cases, the free use of intestinal antiseptics is practically essential. It might be well to increase your podophyllin dosage somewhat and to give early a few doses of quinine, with or without salol. This will relieve the muscular soreness in very nearly every case. Sometimes, especially if the temperature is high, you may initiate treatment with quinine and acetanilid.

Do not forget that occasionally all these conditions may occur in acute gastric indigestion, and not infrequently the whole train of symptoms disappear after the hypodermic administration of 1-10 grain of apomorphine or the ingestion of one-half pint of warm water, with a little salt and ground mustard added. Prompt emesis often works wonders and in practically every case will permit us to obtain more definite results from later medication; the indicated remedies, moreover, can be given in much smaller dosage.

In the condition you describe in the last paragraph of your letter, the combination of salicylic acid (natural), gr. 1; calcium iodide, gr. 1-3; colchicine, gr. 1-250; bryonin, gr. 1-128; macrotin, gr. 1-12; boldine hydrobromide, gr. 1-64; with aromatics; may be administered with a draught of hot water every two or three hours, and great advantage expected. Or, if for any reason this is unobtainable, salicylic acid or salicin may be given, with bryonin. Most of these patients will be benefited by taking an epsom-salt sponge-bath.

This writer regrets that he is unable to help you more definitely, but the clinical picture presented is too vague—or, rather, too vast—to be covered comprehensively.

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Query 6315.—"Aphonia." G. W. T., Louisiana, wants us to suggest a remedy for "loss of voice following an attack of measles in a young man of twenty-four."

It is possible that collinsonia, in alternation with calcium iodide, will prove beneficial here. As you are aware, complete aphonia coming on suddenly usually disappears suddenly, whereas, incomplete aphonia that comes on slowly is equally slow in getting well. Where there is paralysis of the adductors, quite prolonged and carefully thought-out treatment will be in order.

The functional form of aphonia is observed in anemia, general weakness, neurasthenia, and local inflammatory conditions of the larynx. Myopathic paresis may be induced by such toxic causes as tuberculosis, syphilis, typhoid fever, typhus, cholera, and also by phosphorus, copper, arsenic, and lead, or it may occur in any catarrhal affection of the larynx.

It is always best to apply, with a laryngeal brush, some mild astringent preparation, the patient being encouraged to phonate during the subsequent spasm. Before making the application, a laryngeal mirror should be placed in position and the patient instructed to take a few deep breaths and then make some loud expiratory noises and cough repeatedly. The mirror is then reintroduced and the procedure repeated. The patient should be informed that "the voice is returning" and requested to try and count aloud up to ten. Such treatment should be given once or twice a week. Not infrequently, faradism may be employed with advantage. One electrode is placed over the episternal notch, while the other is applied alternately to the sides of the larynx.

You will find this subject very thoroughly discussed in Thomson's "Diseases of the Nose and Throat."

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Query 6316.—"Mastoiditis. Poisoning with Lye." E. W. S., Oklahoma, has under treatment a case of "rising in the ear" (or head?). The patient is a man in good health, except for this trouble, and our correspondent fears "the mastoid bone will become involved, as the condition is so obstinate." Other cases in his practice have yielded to echinacea, with calcium sulphide to saturation. He asks whether a bacterin would be of service.

2. "What is the antidote for eagle lye, and what should be done for a child soon after swallowing a small amount of it?"

As to Case 1, we, unfortunately, are not familiar with the character of the infecting microorganism in the case you describe. If you will send a specimen of the discharge to a bacteriological laboratory an autogenous bacterin can be prepared, which will meet the requirements more satisfactorily than any stock bacterin. However, the condition you are dealing with seems to be a serious one and the man probably will require the services of an experienced aurist. Meanwhile, the auditory canal may be carefully cleansed with a 1-4-percent chlorazene-solution. Internally, we should give such remedial agents as arsenic sulphide, calcium sulphide, and echinacea, in full dosage.

"Eagle lye" is a substance with which we are not familiar; we surmise, though, that it is a concentrated lye, "Eagle brand." In

poisoning with powerful alkalis (ammonia, potassa, soda), first assist vomiting with copious draughts of lukewarm water; but do not use a stomach-tube, for fear of causing perforation. Then give vinegar and water, orange-juice or lemon-juice in liberal amounts, or tartaric acid—1 or 2 drams dissolved in a pint of water.

To relieve pain, administer 1-16 to 1-8 of a grain of morphine, hypodermically, or 10 to 20 minims of tincture of opium by mouth.

Then, to protect the eroded membrane, give 1 or 2 drams of olive-oil or the white of 3 or 4 eggs, also barley-water, gruel, milk, mucilage or linseed-tea.

If a considerable quantity of concentrated lye is swallowed by a child, the result is likely to be serious.

—

Query 6317.—"Agaricin and Aspidospermine." J. T. M., Canada, has lately had a number of cases of night sweats, following various rundown conditions (none of them tuberculous), but, he has hesitated to try agaricin, first wanting to know what are the symptoms of an overdose and just how it should be given. He tried the aspidospermine in two or three cases of dyspnea, but did not see that it produced any effect, possibly because he did not give enough of it.

Agaricin arrests perspiration by its action on the peripheral nerve-ends, as does atropine, but has none of the disagreeable effects of the latter drug on the pupil, mouth, and skin. It is used only as a remedy for excessive sweating (hyperhidrosis), especially the night sweats of phthisis. It has no particular effect on the pulse, temperature or respiration, although toxic doses, if injected intravenously, first stimulate and then paralyze the medulla, the blood pressure rising and then falling, while the heart first is slowed by inhibition and then regains its rhythm, finally failing after the arrest of respiration.

The patient soon becomes accustomed to agaricin and the dose must be increased. No bad effects have been recorded from its continued use in proper dosage.

It must be remembered that atropine antagonizes agaricin, 1-6 grain of agaricin fairly counteracting 1-134 grain of atropine.

Agaricin, according to Hofmeister and other observers, paralyzes the peripheral nervous apparatus of the sudoriparous glands, this action being produced by small doses, not large enough to affect the central nervous system at all, nor the sympathetic.

In every case, it is necessary to adjust the dose to meet the individual requirements. We suggest that you begin with 1-12 of a grain, administering this quantity three or four hours before the expected sweat; then increase gradually by 1-64 of a grain, as may be necessary.

Aspidospermine, in small doses, stimulates the respiratory center, making the breathing more rapid and deeper, while slowing the heart and lowering the temperature. Here, again, the dosage is doubtful, and we should be inclined to begin with 1-32 of a grain every fifteen to thirty minutes, to effect, then as required.

—

Query 6318.—"Palmar Eczema." C. R. W., Minnesota, is treating a patient whose hands (palms) are dry and crack; there is also much itching. Ointments, the arsenates, calcium sulphide, and other remedies have been tried, but the man gets no relief. He is (supposedly) in good health in every other way. We are asked to suggest treatment.

It appears to us that you have to do with a case of palmar eczema, for which, as you may be aware, one of the best remedies is salicylic acid, preferably applied in the form of an unguent, with petrolatum and benzoated lard as the base. The usual strength employed is from 20 to 50 grains to the ounce. It is probable that the addition of 10 or 20 percent of lanolin to the base will prove of advantage.

Stelwagon recommends the application of calomel-ointment and of white-precipitate ointment. He says that tarry preparations, in ointment form, sometimes are of distinct service, but, their action is doubtful in any given case. They should at first be tried experimentally on a small surface.

When there is very marked thickening of the cuticle, salicylated collodion, of 4- to 10-percent strength may be applied (after thorough washing); two or three coats twice daily for two or three days, and then allowed to loosen. Such application should be repeated if necessary.

In simple chapping, the mildest example of fissured eczema, a weak glycerin lotion or mild ointment may be rubbed in nightly. Of course, the hands must be kept out of water as much as possible, or, when washed, rubbed thoroughly dry. An excellent formula in these cases is: tincture of benzoin, dr. 1-2; glycerin, drs. 2 1-2; water, drs. 5. Filter after a time.

It would be well to have this patient's urine examined, as in nearly all these cases elimination is poor and more or less intestinal fermentation exists.

Dioxogen

THE PURIFIED AND STABLE PEROXIDE OF HYDROGEN

The war has enhanced the reputation of Peroxide of Hydrogen as an efficient means of treating infected wounds. Its remarkable oxygenating effects, when employed for Tetanus and Gas Gangrene, have been vouched for by a long list of surgeons and especially of French surgeons.

The results gained from its use alone or in conjunction with other antiseptics have fully borne out the oft made assertion that in the treatment of infected wounds or in any conditions in which the employment of a germicide is called for, Peroxide of Hydrogen holds a position second to none.

DIOXOGEN surpasses the ordinary preparations of Peroxide of Hydrogen in the following salient features:

DIOXOGEN is nearly half again as strong as ordinary Peroxide and is practically free from impurities;

DIOXOGEN is possessed of extraordinary stable properties—a most essential property, especially in time of war. Its loss will not exceed 5% in a year.

DIOXOGEN has great germicidal powers, it oxygenates and thus inhibits the growth of micro-organisms, and is harmless to healthy tissue;

DIOXOGEN does not change in taste, color or odor, as do the acetanilid preserved solutions.

In short, while the effects of even the carelessly made solutions of Peroxide of Hydrogen are good, those of **DIOXOGEN,** because of its freedom from defects, are infinitely better.

Physician's Sample Will Be Gladly Sent on Request

The Oakland Chemical Co.

10 Astor Place - NEW YORK, N. Y.

News Notes Department

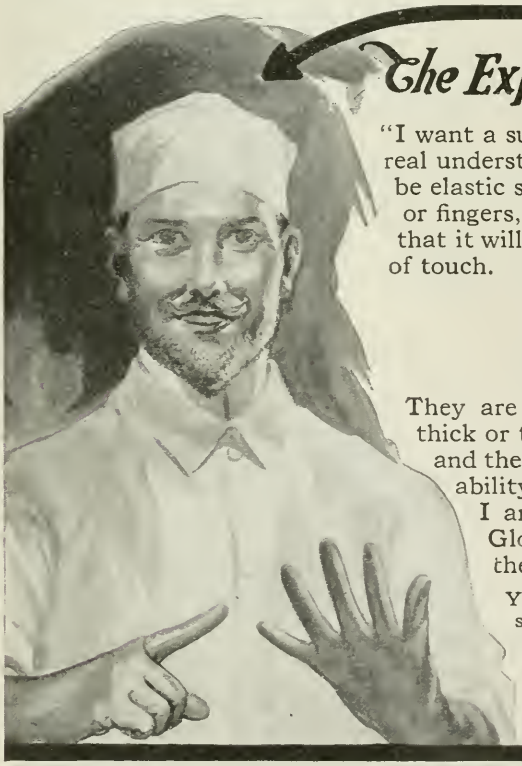
As a general proposition, it is not wise for the physician to depend for his sources of information regarding matters medical upon either lay publications or advertising literature, even though occasionally certain facts may be called to his attention in this manner that had escaped it heretofore. Some years ago the advertising literature of medical supply houses justly and properly was condemned because of many half-true and leading statements that were incorporated, being designed solely for the purpose of selling goods. However, more recently the trend that is making itself felt very emphatically in general business practices is followed also by manufacturers of chemicals and medicines and the advertising literature turned out by them is incomparably more dignified than formerly, and, indeed, very often may lay claim to being designated as scientific literature. Unlimited care and pains are taken in the preparation of the pamphlets issued by manufacturing chemists in order to inform physicians truly and as fully as may be of the actual nature and merits of their products.

While even now there would be no justification in the attempt to "study materia medica" in such advertising pamphlets, they may properly lay claim to be suitable for convenient sources of reference and orientation and to constitute excellent review of subjects that require considerable time and effort for complete study in textbooks.

We are moved to make these reflections by the study of an unusual little pamphlet gotten out by The Howard-Holt Company of Cedar Rapids, Iowa, concerning their new iodine preparation hexamethylenaminetetraiodide ($C_6H_{12}N_4I_4$), called S-iod-amine or "Siomine." The pamphlet referred to inquires in an interesting manner into the action of iodine on the organism, and justifies the preparation of an insoluble iodine compound that is, however, disintegrated by the action of the hydrochloric acid of the gastric juice. The fact that iodine enters into the treatment of so many disease conditions and that it is necessary to have at command one or several dependable iodine preparations which are free from undesirable properties causes us to recommend this little pamphlet cordially to our readers. It can be obtained by request from The Howard-Holt Company, Inc. When you write for it, Doctor, we should like you to mention CLINICAL MEDICINE as your source of information.

The Bush Motor Company, Bush Temple, Chicago, is advertising a five-passenger, 34.7-horsepower car, the description of which is very tempting. If you are in the market for a new automobile, Doctor, it might pay you to write to J. H. Bush, Pres., Dept. 6-NO, Bush Temple, Chicago, Ill., asking for information.

There are frequent instances of functional uterine disturbances and even such of organic disorders in which certain remedies appear to exert an influence that is directed particularly upon the pelvic



The Experienced Surgeon Says

"I want a surgical glove that has been developed by real understanding of the surgeon's needs. It must be elastic so as not to restrict the movement of hand or fingers, it must be tough, and it must be thin so that it will not interfere even slightly with the sense of touch. I find all of these qualities in

Miller Surgeons Gloves

They are always uniform in thickness, free from thick or thin spots particularly in the finger ends, and they fit perfectly. While their perfect adaptability to the surgeon's needs is the main point, I am interested also in the fact that Miller Gloves stand the most sterilizations and are therefore economical."

You can get Miller Surgeon's Gloves from leading surgical and physicians' supply houses and wholesale druggists everywhere. If your dealer does not stock them write us, mentioning the dealer's name.

The Miller Rubber Co.
AKRON, U. S. A.

THE KEYSTONE OF GOOD BAKING

Your biscuits, rolls, gems and other dainty bread-stuffs can be no better than the baking powder with which they are made. Good baking powder is the leavening agent that makes them light and digestible. It is the keystone in the making of appetizing, wholesome cake, biscuits, muffins, etc.

Of course, you want only the best of baking powder, and this is always assured when you use

ROYAL Baking Powder

Made from Cream of Tartar derived from Grapes

No Alum
No Phosphate

organs. Several of these remedies have been prescribed in a form in which it is said to have been used with satisfaction by Professor Marion Sims, and which has long been a favorite with many physicians. We refer to Hayden's Viburnum Compound, a preparation that is well known to American physicians, and is relied upon by many for the relief of painful menstruation. The makers of this preparation are the New York Pharmaceutical Co., Bedford Springs, Bedford, Mass., who will be glad to send copy of the formula, also literature and samples to physicians on request. They have also put out a "Uric Acid Solvent (Hayden's)" which is said to stimulate functional activity, thus aiding in carrying off effete and other substances that encourage socalled rheumatic conditions and other manifestations of faulty elimination. Of this preparation also, formula, samples and literature await the pleasure of physicians.

The vast problem of bookkeeping is one to turn the doctor's hair gray, not only because people are so prone to neglect him in apportioning their expenditures but also because he himself is apt to be careless in looking after the financial aspect—the business side of his work. Many systems have been devised and attempts made to turn physicians into business men and successful financiers, but it is to be feared that we are hopeless. Nevertheless, we are interested in a simple and complete system for the medical profession, "The National Cash Register Co. Credit File" which is offered by The National Cash Register Co., Dayton, Ohio. This system eliminates bookkeeping and avoids errors, saves time and effort, and (Oh, good!) it saves money. By all means, let's write to The National Cash Register Co., addressing Department 5, and find out about this new stunt, and let's hope that we'll all get rich. Seriously, any contrivance or system gotten out by The National Cash Register Co. merits consideration and deserves careful inquiry. It would be a godsend if their efforts in behalf of the physician as a business man might enable us to attend properly to the business side of our practice.

All "Mellin's Food Babies" are an inspiration, at least in the advertising pages of American magazines, enjoying a merited and well established position. Their smiling baby faces, their plump, dimpled forms, their nonchalant manner of looking at you from the printed pages makes one feel as though Mellin's Food is about the best ever for the training of candidates for baby-shows. Seriously, however, Mellin's food really is a good thing, and has been the means of saving numberless babies by correcting the consequences of faulty feeding, or establishing a healthy and normal growth. Mellin's food is suitable also, and excellent, as an invalid's food; in short, it is one of the standbys of mothers, as well as nurses and physicians.

The laboratory has come to be a very important item in the outfit of a physician who desires to do good work and to guard the interests of his patients to the best of his ability. While it is very convenient to send pathologic specimens to special laboratories that have been established for the purpose of relieving physicians of the drudgery of laboratory work, every physician should be able and equipped to make urgent investigations himself. Among the apparatus required for most laboratory examinations, a good centrifuge is one of the most important items, such, for instance, as can be bought from the Chicago

"Swansdown is Sackcloth—Compared to C. S. Z."

C. S. Z. robs Summer-time of Suffering

Clinging, Soothing, Zephyr-light

McK&R

COMPOUND STEARATE OF ZINC

is Unctuousness Exemplified—in the form of Dusting and Dressing Powder for all

Skin Irritation, Itching, Smarting, Burns, Cuts, Ulcers, Eczema, Hives, Herpes, Chafe, Prickly Heat, Ivy Poison, etc.

Send for *"Below the Equator"* *Samples*

McKESSON & ROBBINS **NEW YORK**
INCORPORATED ESTABLISHED 1833

The Warm Weather Dietary

should be as free as possible from excessive heat-making material, yet contain the necessary protein and carbohydrates to insure physiological tissue-repair and maintain normal body energy.

Without discussing here the sources of protein—animal and vegetable—there seems to be a growing sentiment, among physicians who realize the importance of dietetic as well as therapeutic measures, in favor of vegetable protein, especially during the summer months.

To start the day well, a warm weather breakfast which includes a dish of **Grape-Nuts** and cream (slowly and thoroughly masticated) supplies energy for the forenoon, and the individual will have an appetite for the usual noontime meal.

Experience has proved that a breakfast of this kind usually prevents that "gone feeling" about eleven o'clock, which so frequently follows the customary breakfast.

Grape-Nuts is made of whole wheat and malted barley, and with cream or milk, is a perfectly balanced ration. Scientifically processed (which includes long baking) it is easily digested and quickly absorbed, supplies energy with small tax on the digestive organs, and promotes clear thinking and physical comfort, even in the warmest weather. Patients, as many physicians and nurses well know, soon come to value and enjoy Grape-Nuts.

The ***Clinical Record,*** for Physician's bedside use, together with samples of **Grape-Nuts, Instant Postum** and **Post Toasties,** for personal and clinical examination, will be sent on request to any Physician who has not already received them.

Postum Cereal Company, Battle Creek, Mich., U. S. A.

Surgical and Electrical Co., 316 W. Superior St., Chicago, Ill.

Conditions often rise in which it is not possible to obtain fresh milk that is actually pure and clean, and that comes up to the standard in every respect. Circumstances may then render the use of artificially preserved milk necessary, particularly when it is a question of securing as uniform an article as possible, a contingency which arises particularly in the artificial feeding of infants. Under these circumstances, it is necessary for the physician to have at his disposal a brand of preserved milk that is reliable, that is honestly made, and that contains all the nutritious properties of milk without any objectionable features in the way of preservatives or other disadvantages. Carnation Milk is offered by the Carnation Milk Products Company, 625 Stuart Bldg., Seattle, Wash., with the guarantee that it is prepared under absolutely sanitary methods of handling and that it has all the ordinary contents of nutritious baby foods and solids. "The Story of Carnation Milk" is an interesting booklet on the subject that may be had on request. When writing for it, Doctor, please tell them that you saw their announcement in CLINICAL MEDICINE.

Whether the greater frequency, at the present time, of gallstones is apparent or real, whether gallstones are recognized more readily than they were formerly or whether cases actually occur more often, is a matter of detail that is of less importance than the actual fact that this evidence of insufficient biliary function is alarmingly frequent. In correcting perverted physiological function, it should always be the endeavor of the physician to proceed along physiological or natural principles and, since the secretion and action of the biliary flow largely depends upon the bile salts, the therapeutic use of these substances evidently is a logical one; for this reason preparations like Taurocol (consisting of bile salts, extracts of cascara sagrada, phenolphthalein and aromatics) deserve a place among the best established remedies of materia medica. Taurocol is prepared by The Paul Plessner Company of Detroit, Michigan. It is manufactured exclusively for the use of physicians, being advertised only to the medical profession, and has made good its claim as a superior preparation of the bile salts.

In the matter of treatment of bacterial diseases, the general practitioner often finds it difficult to discover just those points upon which he desires information in the large number of articles that are constantly published in medical journals. It is rather a difficult task to collect and sift the information which is needed by the general practitioner in resorting to this form of therapy, because text-books on immunity and journal articles on the subject are apt to leave him in the dark in exactly those points which he desires to have elucidated.

Dr. G. H. Sherman, of Detroit, Michigan, has succeeded in presenting a very acceptable guide on the administration of bacterial vaccines—and bacterins, in which he explains the therapeutic action of these potent remedies, and describes how, when and where to use them. This volume, which is out in its third edition, sells for $2.50 a copy and is well worth the outlay.

In Chlorazene, also called Chloramine, the new antiseptic devised by Doctor Dakin (paratoluenesodiumsulphochloramide) The Abbott Laboratories of Chicago present to the medical profession an anti-

If Nature could

she would provide mankind with heel cushions as efficient in the prevention of physical shock and jar as

O'Sullivan's HEELS

But Nature has been so handicapped by civilized manners and customs that her protective efforts are essentially limited. Happily the genius of man has found in another of Nature's gifts a means of supplementing her heel cushions. O'Sullivan's Heels of new live rubber have solved the hygienic problem, and their use not only effectively decreases fatigue, but by preventing repeated shocking of the nervous system—with its inevitable irritation and depression—goes far to conserve the body's resistance to disease.

Medical appreciation of the hygienic value of O'Sullivan's Heels is conclusively proven by the number of doctors who wear them

O'SULLIVAN RUBBER CO. New York City

Marketed in bottles containing 50 pills each

This preparation is never sold in bulk

PIL. MIXED TREATMENT

(Chichester)

This formula and method of preparation in the encapsulated powder form are the result of many years of research and exhaustive tests of the mercurials and iodides, administered separately and in combination, in liquid, tablet and pill form.

Since it was brought to the attention of the profession by Dr. W. R. Chichester, a recognized authority in the therapeutics of syphilis, it has maintained the confidence of physicians both in hospitals and private practice.

Pil. Mixed Treatment (Chichester), is perfectly soluble, tasteless, non-irritant, less expensive than the combination in solution and much more convenient to carry about. It is put up in bottles only, the price of which is $1.00. On request, a serviceable quantity of the preparation will be sent prepaid to any physician.

We are the distributors of **Terraline** also, a refined medical petroleum, put up in the following forms: Terraline plain; with heroin; with creosote.

HILLSIDE CHEMICAL COMPANY, Inc. - - Newburgh, N. Y.

septic that is as closely ideal as it is humanly possible to obtain under present conditions; making use of the well known germicidal properties of chlorine which are truly remarkable. Chloramine is free from the injurious objectionable properties of chlorine. It is strongly germicidal and practically nontoxic, differing in this happy combination of qualities from practically all other known antiseptics. Chlorazene does not precipitate or coagulate proteins, and for this reason is far superior to other antiseptics in the treatment of wounds. In its germicidal action it is fifty-four times more efficient than carbolic acid. It follows that Chlorazene is the germicide of election in a great variety of surgical conditions, and already its widespread clinical application, both in emergency- and hospital-surgery, as well as in general practice, has justified the high hopes that were raised by the first announcement of this substance.

In an attractive pamphlet that was published recently, Reed & Carnrick, 42-46 Germania Ave., Jersey City, New Jersey, enlarge interestingly upon the "frightfulness" of old-fashioned fever mixtures, blood purifiers, and physics galore, which, if their virtues had been proportionate to the affront offered to the taste, smell—and sight, too—should have accomplished results, compared to which such achievements as raising the dead and healing the leprous pale to insignificance.

Certainly the reproach of *nastiness* can no longer be raised against modern pharmaceutics, at least against those that are made by manufacturing chemists who specialize as it were and concentrate their efforts in the production of certain definite lines of preparations.

In this same pamphlet Reed and Carnrick refer to Trophonine, a concentrated liquid food that has long been employed in nourishing the sick, the convalescing and the debilitated. The caloric value of Trophonine is high, representing as it does proteids, carbohydrates, sugar of milk, and other ingredients in a highly acceptable form and suitable proportions, the value of which is greater for the reason that the vitamines of its constituents have not been destroyed. Trophonine undoubtedly constitutes a highly acceptable and delicious food tonic for the sick, and for those patients in whom careful and yet efficient feeding is of paramount importance. Reed & Carnrick have a considerable list of splendid preparations to their credit and it will pay you, Doctor, to get in touch with this firm.

The etiology of rheumatism or, better, of arthritis, has been the subject of much careful study, which led to positive results, at least for a fair proportion of the cases which the practitioner is called upon to treat. It is now known definitely that arthritis is of bacterial origin in many instances, and that, very often, a streptococcus is responsible for the attack which may be secondary to a prior localization in the tonsils or in other primary foci. In order to secure a wider "sphere of influence," a plan has been conceived of making up bacterins from several strains of streptococcus, which are obtained by blood cultures from actual cases of acute and chronic arthritis. The Swan-Myers Company, of Indianapolis, Indiana, prepares such a rheumatic bacterin and stands ready to supply it in 20-mil rubber-stoppered vials. Literature will be sent on request.

In the digestion of milk in the stomach the milk protein, caseinogen undergoes certain definite changes; the first effect of the gastric juice being to convert caseinogen into an insoluble casein. This

This Combination

Has Been Proved Particularly Efficacious in

SYPHILIS

Cases showing positive tests before treatment gave negative results following treatment with **Venarsen**, and **Mercury Oxycyanide** as an interval, administered Intravenously; after five years these tests still persist negatively, with no disposition to revert to positive.

MERCURY OXYCYANIDE

Is a non-irritating Mercury in solution, especially prepared by us for intravenous administration. It is used as an interval treatment with Venarsen in Syphilis.

VENARSEN

Is a comparatively non-toxic organic arsenic compound, 5 cc. of the solution representing 0.7 Gm. of organic arsenic and 0.78 Mg. metallic mercury in combination. It also is prepared in double and triple strength.

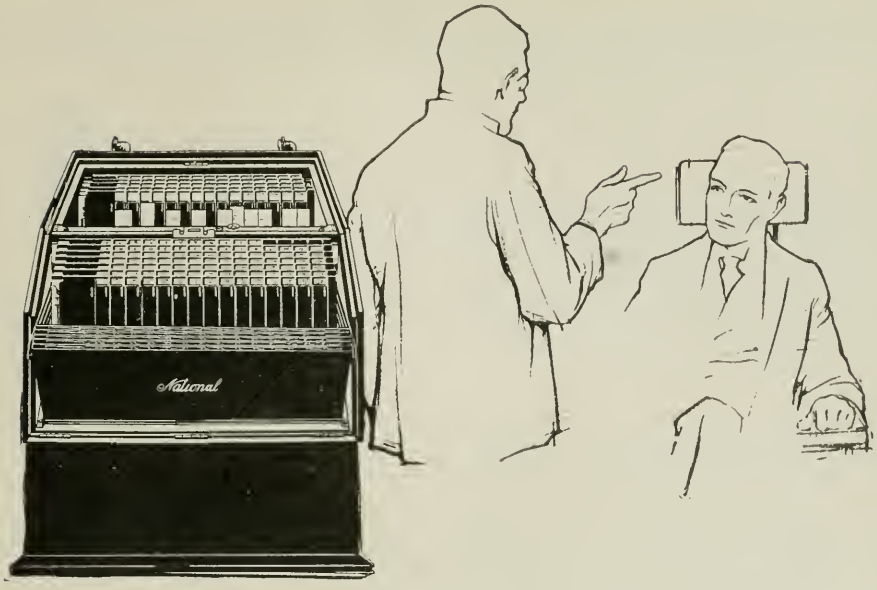
WRITE FOR DESCRIPTIVE LITERATURE

THE INTRAVENOUS PRODUCTS COMPANY

MANUFACTURING CHEMISTS

DENVER, COLORADO, U. S. A.

Atlanta Boston Chicago Detroit Kansas City Los Angeles
New York Oklahoma City Calcutta Havana Mexico City



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No ledger—no more forgotten charges. Keeps every patient's account balanced to the minute and ready for immediate settlement. Gives an accurate statement any time a patient wants one.

Simple and complete. Easy to operate. The ideal accounting system for the medical profession.

Do not waste time, effort and patience doing the work a machine can do for you. Write to us for literature on the Credit File.

Address Department 5.

The National Cash Register Co., Dayton, Ohio

action generally is ascribed to the presence of a distinct ferment in the gastric juice, namely, rennin or rennet. Rennet was held to be identical with pepsin, but the Swedish chemist Otto Hammersteen has succeeded in separating the two ferments, rennet with the power of coagulating neutral and slightly alkaline milk, and pepsin, having the property of digesting albuminous matters, but not the power of coagulating milk except in the presence of comparatively strong acidity.

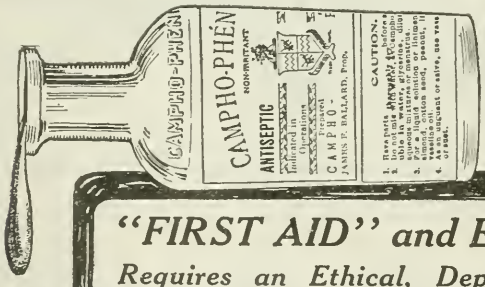
Rennet has been made use of widely for rendering milk more digestible and more acceptable to the patient in the preparation of junket, curds and wheys, etc., which have long formed acceptable dishes for invalids. A reliable preparation of rennet is put on the market by the Chr. Hansen's Laboratory, Little Falls, New York, who publish an interesting little booklet entitled "Junket in Dietetics," giving valuable information concerning rennet, junket and similar products.

The laxative properties of flaxseed have been utilized for many years—in cattle, but it is only comparatively recently that we have developed sufficient sense to make use of this very simple means of securing regular peristalsis and evacuation of the bowels without recourse to irritating drugs. Although the idea of combining this agent with some simple foodstuff seems logical and self-evident, it has not been made use of except by only one concern, the Uncle Sam Breakfast Food Company of Omaha, Nebr. Uncle Sam Health Food is a scientifically prepared food, containing flaxseed and corn flakes. It affords an excellent nutriment of easy digestion and at the same time possesses a gentle laxative action, securing or the patient relief naturally, and thus conforming of physiological processes. You may like to try this excellent food, Doctor, either yourself or for some patient, and you need only send your name and address to the Uncle Sam Breakfast Food Co., mentioning CLINICAL MEDICINE, whereupon a full size package will be sent to you free of charge.

The Coolidge X-Ray Tube differs in principle from the ordinary tube in that the discharge-current which can be passed through the tube is determined primarily by the temperature of the cathode filament, and responds instantly to changes in the same in either direction. It consists of a tube exhausted to a pressure of not more than a few hundred millionths of an atmosphere in which is supported the cathode and anode, both being thoroughly freed from gas. The tube can be operated continuously for hours with either high or low discharge currents, without showing an appreciable change in either the intensity or the penetrating power of the resulting radiations.

In operation, the tube shows no fluorescence of the glass and no local heating of the anterior hemisphere. It permits of the realization of the intense homogeneous primary Roentgen rays of any desired penetrating power. The Coolidge tube is furnished with three sizes of focal spots, fine, medium and broad.

The latest medical literature contains many communications on the satisfactory and favorable results secured in the treatment of burns by the application of mixtures of paraffin, resins, etcetera, and a goodly number of such preparations has been put on the market, all of which have common basic advantages differing, however, in the kind and proportion of antiseptics that may be added. Among the various preparations made in accordance with the formula for the French "ambrine" for the treatment



Campho-Phenique

"FIRST AID" and EMERGENCY SURGERY

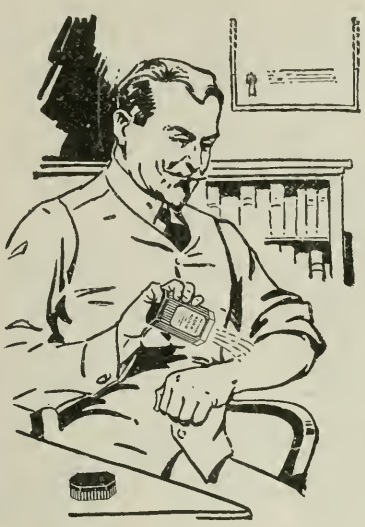
Requires an Ethical, Dependable and Reliable Dressing.

Campho-Phenique Liquid *as a "FIRST AID" Dressing meets these requirements. PHYSICIANS can demonstrate this claim by placing* **Campho-Phenique Liquid and Powder** *in SURGICAL GRIP when calling on your next case. Gives quick results and helps to prevent infection.*

Samples on request.

CAMPHO-PHENIQUE CO., - ST. LOUIS, MO., U. S. A.

3.



MENNEN

KORA-KONIA

Try it *yourself* Doctor

KORA-KONIA for the Doctor's own use—is valuable in many ways. After a busy day when occasion calls for a cooling, soothing, healing powder use KORA-KONIA and you will get first-hand knowledge of its efficiency.

KORA-KONIA soothes and aids in healing tired, blistered feet, raw, chafed surfaces, skin abrasions, insect bites, prickly-heat, sunburn, cuts, minor wounds and burns.

ON REQUEST—we will send you an order on your Druggist for regular size package—25c. We want you to have **KORA-KONIA** in your own home to try it by test and find out its many valuable uses.

THE HOUSE OF MENNEN NEWARK, N. J.

ORDER FOR *FREE* PACKAGE OF **KORA-KONIA**

For Physicians and Surgeons ONLY

Tear off and mail to the House of Mennen, 42 Orange St., Newark, N. J., Dept. A

Without any obligation on my part send me through my druggist a full size package of KORA-KONIA.

Druggist's Name_____

Street_____ City_____ State_____

Ordered by Doctor_____

Street_____ City_____ State_____

of burns, the one presented by the Holliday Laboratories of Pittsburgh, Pa., appears to be a very meritorious one and may be employed unhesitatingly. When writing for further information, Doctor, please mention that you saw it referred to in CLINICAL MEDICINE.

Forty years and more seems an awfully long time to look back to one's childhood, yet the present writer remembers distinctly having his attention called, as long ago as that, to Nestle's Food, which even thne was considered an excellent thing for babies. At that time the boy of course did not realize what the man learned since them; but, during all those year, as a boy in Switzerland, and as a man and physician in the United States, he retained his impression of the value of Nestle's Food, and had it confirmed by ample experience on his own part and that of others. Nestle's Food combines the advantages of milk with those of cereals and cane sugar and therefore constitutes a nutriment that is sufficient for all needs of infants as well as for those of many children and grown persons during the course of certain diseases. It looks back upon a long career of usefulness and meritorious service.

The treatment of drug addiction inclusive of alcoholism has assumed such a great importance of recent years as to be established as a separate specialty which, however, by no means is an easy branch of medical practice, for the reason that the drug addict is sick mentally and physically, and that his treatment requires careful individualization, and a complete knowledge of physiological pathology. In the face of numerous publications purporting to outline and describe modes of treatment which are applicable to ambulatory patients, we have always been of the opinion that the drug addict receives the best chances for recovery by institutiona icare under the supervision of specially trained attendants, both physicians and nurses, and under the wholesome restraint that only an institution can exercise and that does not suffer interference through well meaning but ill advised relatives or friends. We are confirmed in this opinion by the outcome of a study of 235 drug addicts, published in a recent number of *The Boston Medical and Surgcal Journal* in which the author strongly advises against trusting a drug user to cure himself or expect satisfactory results from any method that does not provide for prolonged detention, careful physical and mental rehabilitation, and, upon discharge, well directed medical and social service methods of treatment. The Pine Sanitarium, 1919 Prairie Ave., Chicago, is devoted exclusively to the institutional treatment of alcoholism and drug addicts. It is under the care of trained physicians and nurses, and the treatment is based upon a scientific system of enabling the diseased nervous system to assume its normal function, and in this manner craving for the drug is removed. The treatment, both of drug addiction and alcoholism, includes the administration of hygienic, dietetic and other general methods which have been found to overcome the abnormal mental and physical condition induced by the drug-(or alcohol-) habit. Physicians are invited to investigate the Pine Sanitarium, where they will find every courtesy afforded them and conscientious treatment to their patients.

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The Japanese dish of rice, the Italian polenta, the North German pumpernickel, the Scotch bannock are well known national foods in which grains are employed, whether rice, barley or oatmeal, that are of merit not only from a nutritional point of view but also for the reason that they afford a maximum amount of food in a simple manner. The use of oats as a foodstuff for human consumption is long established, but it was always associated with various disadvantages, among which we think of the scratching-post that moved the pious Scotch to say "God bless the Duke of Argyle." It remained for American ingenuity to prepare this valuable substance in a manner that it became not only nutritious and palatable but entirely free from objectionable features. The foremost result of this ingenuity is Quaker Oats, a food that is so well known that it seems hardly necessary even to mention the name, and when we have done so, we have said enough.

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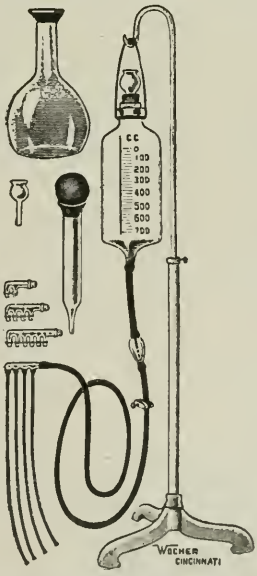

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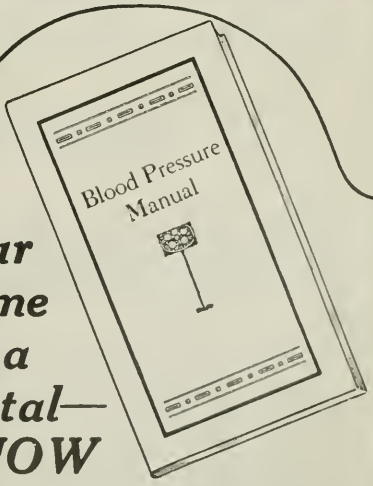

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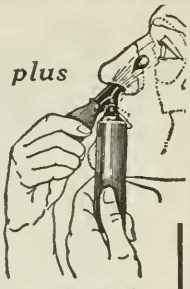

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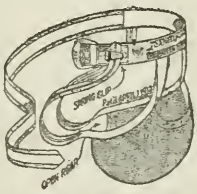

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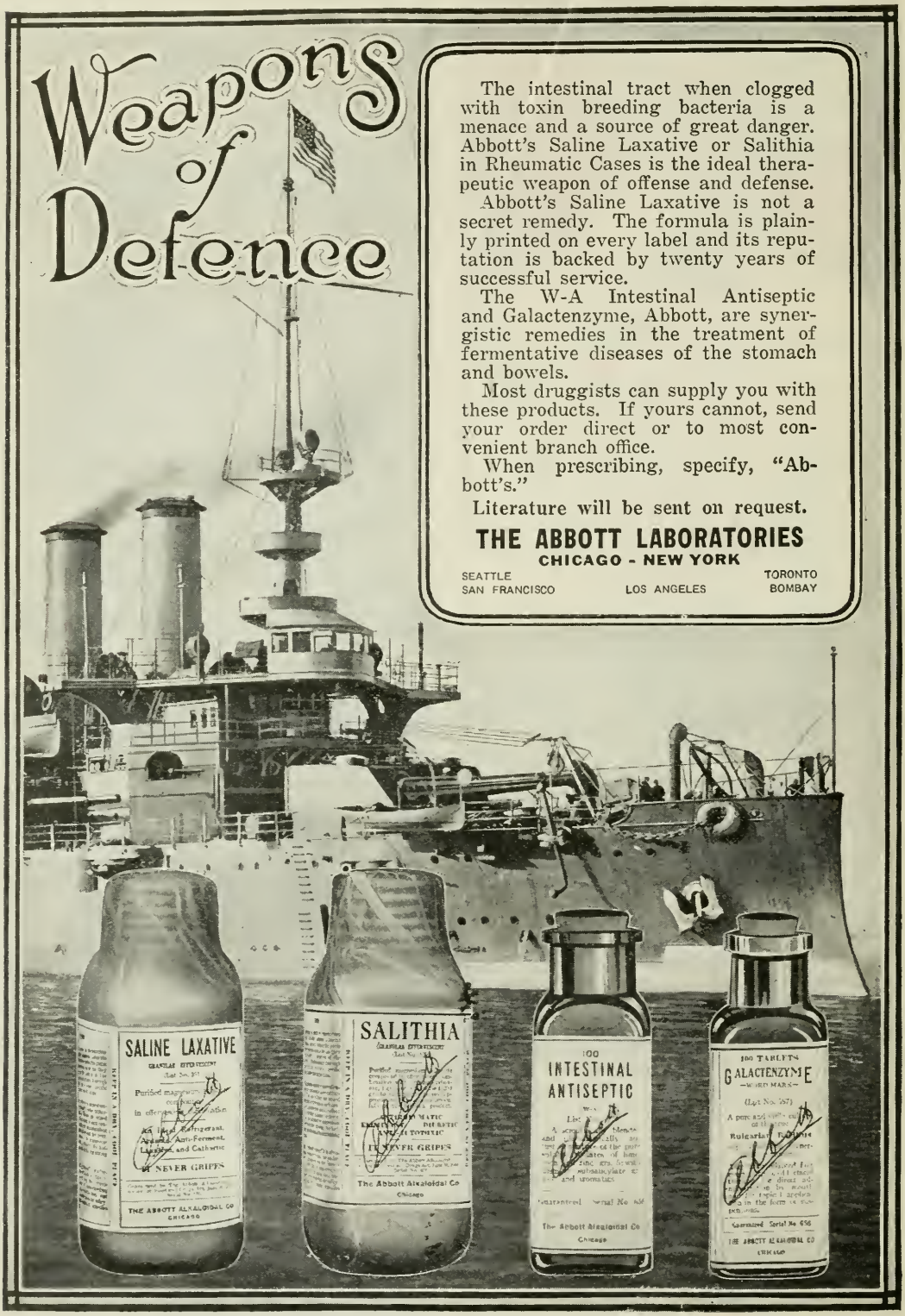

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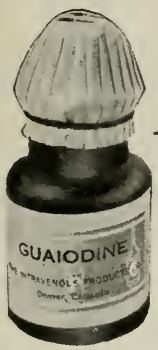

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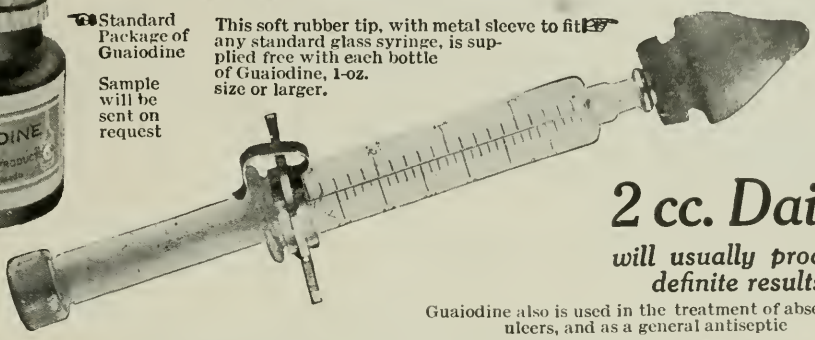

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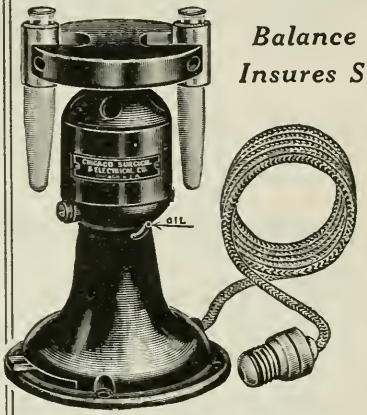

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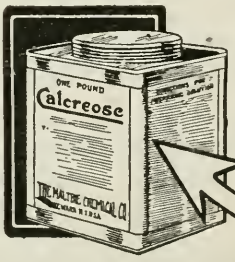

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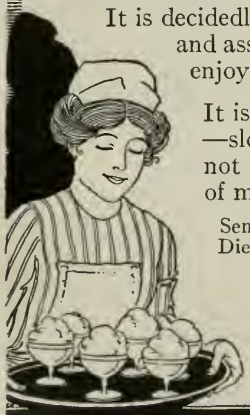

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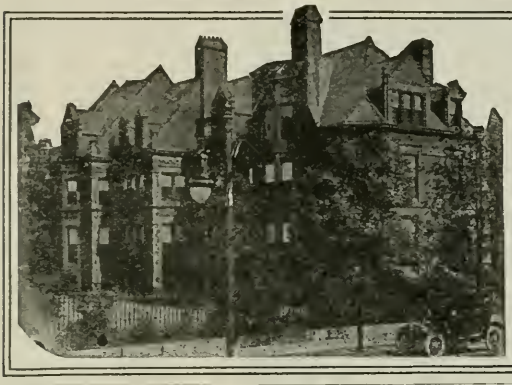

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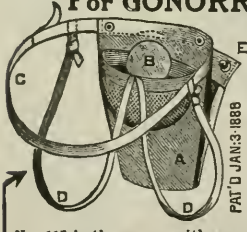

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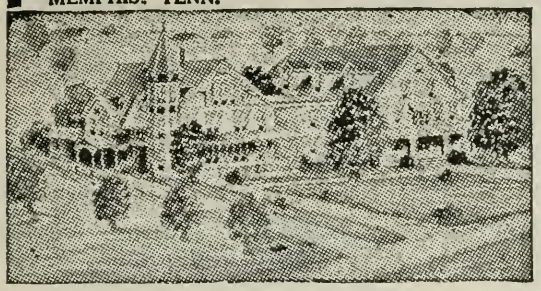

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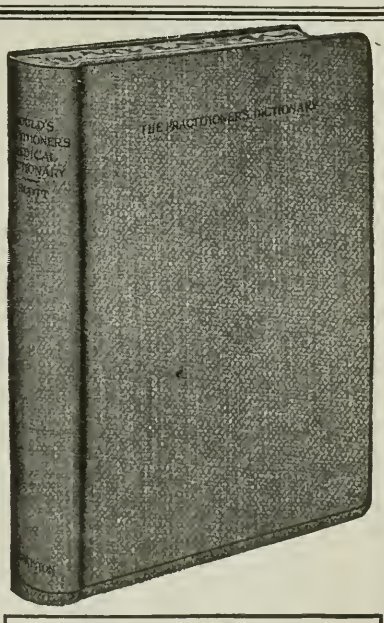

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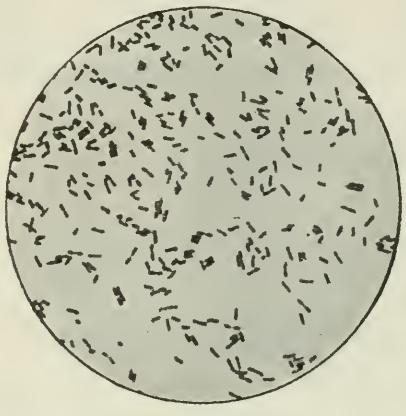
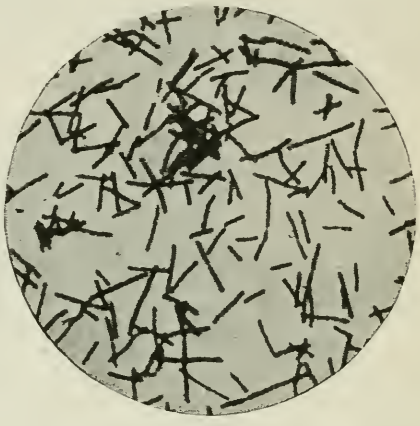
WHAT IS THE DIFFERENCE

between the ordinary lactic acid bacillus and the true Bulgarian bacillus recommended by Metchnikoff for use in cases of intestinal auto-intoxication?



Photomicrograph of smear of culture of lactic-acid bacillus.



Photomicrograph of smear of culture of the true Bulgarian bacillus.

I. Ordinary soured milk, or buttermilk, contains lactic acid bacilli, but not the true *Bacillus bulgaricus*. These ordinary lactic acid bacilli are not suitable for acclimatization in the intestine, for the reason that they produce but little lactic acid, and are destroyed, in a large measure, by the hydrochloric acid of the gastric juices in the stomach.

The ordinary lactic bacillus cannot be depended on to reach the intestine, and it is here that the antitoxic action of the "friendly" bacillus of Metchnikoff, or the true *Bacillus bulgaricus*, is demanded.

The ordinary lactic acid bacillus, found in curdled milk, produces but a small amount of lactic acid, as compared with the true *Bacillus bulgaricus*.

According to Herschell, the main agent in inhibiting the growth of other bacteria, and arresting the growth of putrefactive organisms, is the acid-producing *Bacillus bulgaricus* in a sugar medium.

Ordinary lactic acid preparations may contain alcohol-producing bacilli, yeasts, and other microorganisms, which can be of no utility and may even prove injurious.

II. For the treatment of intestinal autointoxication, the true *Bacillus bulgaricus* is the preferred organism of its class, because it produces a larger amount of lactic acid, because it is capable of acclimatization in the intestine, and is able to withstand higher degrees of acidity than other lactic acid bacilli. It is for these reasons that the true *Bacillus bulgaricus* can be depended upon to pass through the gastric digestive processes unharmed, thus reaching the intestine where it can exert its beneficial action.

For practical clinical work, cultures of the true *Bacillus bulgaricus*, in tablet or bouillon form, are most convenient, and are to be preferred, either for direct administration or for the preparation of soured milk. In these preparations the bacilli are in a condition of suspended animation, in which dormant condition they remain to be revived and become active again under the influence of warmth, moisture and food. It is important that a product containing only the pure cultures be used. A wise selection is Galactenzyme, Abbott.

(*See next page for further particulars*)

GALACTENZYME, (Abbott)

IS A PURE VIRILE CULTURE OF THE TRUE BACILLUS BULGARICUS, (Type A)

METHOD OF MANUFACTURE Galactenzyme is made from selected cultures of the true *Bacillus bulgaricus*, grown in the most suitable medium to insure the maximum number of strong living bacilli.

The developed cultures are mixed with selected milk sugar, on tables enclosed in glass; they are then dried at room temperature in a special dryer by means of a rapidly moving current of filtered air. The dryer is built so that every shelf can be sterilized. The dried granulation is compressed into tablets in a machine, all the working parts of which are sterilized and which delivers the tablets into sterile bottles without exposure.

During these processes no hand comes in contact with the product, as the operators are as carefully gowned and gloved as a surgeon. The room itself is steamed to eliminate, as far as possible, any air contamination.

I. Steamed room where Galactenzyme alone is made.

INDICATIONS Galactenzyme is being successfully used in the treatment of intestinal fermentative diseases, toxemias, diarrheas and indigestion. It is giving splendid results in gastroenteritis in infants, and in adult disorders arising from putrefactive conditions in the intestines.

Galactenzyme is found of great value in the treatment of typhoid fever, dyspepsia, dysentery and other diseases arising from the absorption of toxins from the bowel and plays an important part in the relief of intestinal conditions accompanied by putrefactive fermentation.

Galactenzyme tablets crushed, or Galactenzyme Bouillon, as a local application is of demonstrated merit in various mucous-membrane infections, as well as for ulcers and suppurating wounds.

RESULTS "Some advocate the use of buttermilk, but I have had great trouble in getting children to take it and I can see no advantage in it, for we can accomplish better results either by giving Galactenzyme tablets suspended in water or by adding one or two crushed tablets to the feeding. I have treated some cases that were very severe, and by cleaning out the bowel, giving no food for twenty-four hours (nothing but water with *Bacillus bulgaricus* tablets) and gradually returning to modified milk, beginning with a very low dilution, I have had splendid results."—Dr. J. F. B.

Doctor, try Galactenzyme. You will find it a valuable ally in your practice, particularly during the hot summer months.

II. Sterilized tablet machine which passes Galactenzyme tablets directly into sterilized bottles.

PACKAGES AND PRICES

Galactenzyme Tablets (in bottles of 100), per dozen bottles..... **$7.50**
In less than 1-2-doz. quantities, each.. **.75**

Galactenzyme Bouillon, a pure Liquid Culture of *Bacillus bulgaricus*, "A," per dozen boxes of 12 generous vials..... **7.50**
In less than 1-2-doz. quantities, each.. **.75**

Most druggists can supply you. (Jobbers are stocked.) If yours cannot, send your orders direct to our most convenient point. When prescribing be sure to specify **Abbott's.**

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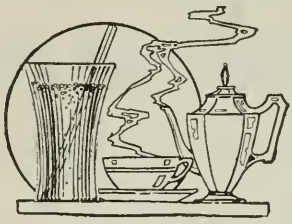

The Composition of Coca-Cola and its Relation to Tea

We have compiled a manuscript giving a detailed analysis of the recipe of Coca-Cola, which is as follows:

Water, sterilized by boiling (carbonated); sugar, granulated, first quality; fruit flavoring extracts with caramel; acid flavorings, citric (lemon) and phosphoric; caffein, from tea.

The following analysis, by the late Dr. John W. Mallet, Fellow of the Royal Society and for nearly forty years Professor of Chemistry in the University of Virginia, shows the comparative stimulating or refreshing strength of tea and Coca-Cola, measured in terms of the number of grains of caffein, the stimulating principle.

		grains
Black tea (hot)	*—1 cupful (5 fl. oz.)*	*1.54*
Green tea (cold)	*—1 glassful (8 fl. oz. exclusive of ice)*	*2.02*
Coca-Cola (fountain)	*—1 drink, 8 fl. oz. (prepared with 1 fl. oz. Syrup)*	*1.21*
Coca-Cola (bottlers)	*—1 drink, 8 fl. oz. (prepared with 1 fl. oz. Syrup)*	*1.12*

From the above recipe and analysis, which are confirmed by all chemists who have analyzed these beverages, it is apparent that Coca-Cola is a carbonated, fruit-flavored modification of tea of a little more than one-half its stimulating strength.

A copy of the manuscript referred to above will be mailed on request and The Coca-Cola Company invites specific inquiry from the medical profession.

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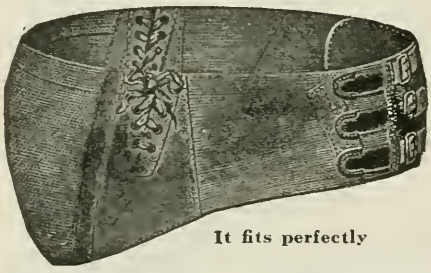

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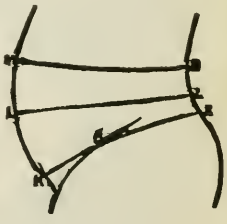

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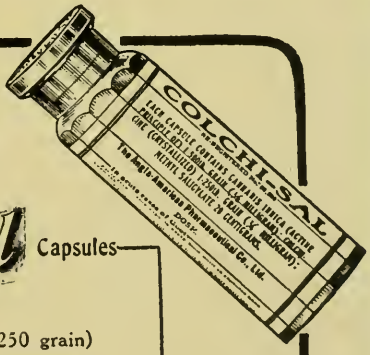

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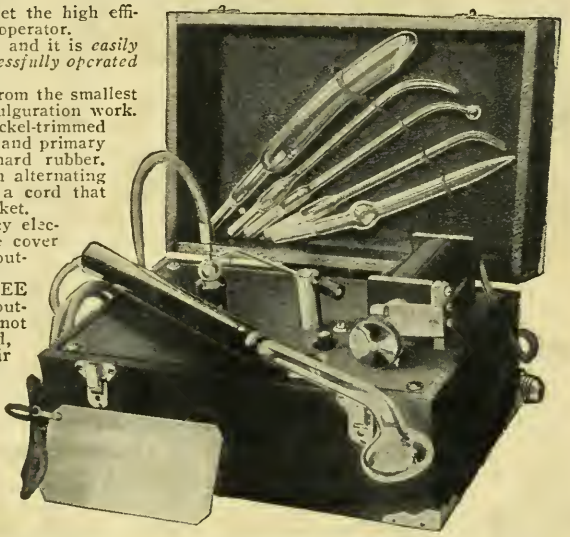

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